

WINTER AT MOSCOW

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MOSCOW

NOVEMBER
1957

Firestone

GROUND GRIP TIRES

Again **SWEEP TO VICTORY**
IN PLOWING CONTESTS AT
WHEATLAND • TROY • LILY LAKE • BIG ROCK



PAUL STIEFBOLD using an Allis-Chalmers Tractor and Firestone Ground Grip Tires scored 96 points out of a possible 100 in the plowing contest at Wheatland.

Listen to the Voice of Firestone featuring Richard Crooks and Margaret Speaks and the 70-piece Firestone Symphony Orchestra, under the direction of Alfred Wallenstein, Monday evenings over Nationwide N. B. C. Red Network

Tune in on the Firestone Voice of the Farm Radio Program twice each week during the noon hour



CARL HAGEMANN using a John Deere tractor and Firestone Ground Grip Tires was second with 85 out of a possible 100 points.



CARL SCHÖGER with a McCormick Deering Tractor and Firestone Ground Grip Tires scored 82 1/2 out of a possible 100 points in the plowing contest.



GEORGE SUSEMIEHL on a John Deere Tractor and Firestone Ground Grip Tires made the high score of 85 1/2 out of a possible 100 points.



NELSON LEEVE and an Oliver Tractor with Firestone Ground Grip Tires was the winner in the men's class at Lily Lake, scoring 95 out of 100 points.



DONALD MORRIS with 91 out of a 100 points took first place in the men's class at Big Rock using a McCormick Deering Tractor and Ground Grip Tires.



CLARENCE SCHÖGER with a McCormick Deering Tractor and Ground Grip Tires took first place in the boys' class at Big Rock.

FIRESTONE GROUND GRIP TIRES again proved their greater traction and superior performance by sweeping to victory in every class and every contest of the four national plowing meets. The overwhelming preference of national plowing champions for Firestone Ground Grip Tires is convincing proof that when the utmost in performance is necessary, Firestone Ground Grip Tires are the *No. 1 Choice of American farmers*. In competition, with precious points at stake, champion plowmen know they can put complete faith in Ground Grip Tire performance. This year at Wheatland, Paul Stiefbold, on a field drenched by a torrential rain, piled up the highest score with a tractor in the history of the meet — 96 out of a possible 100 points. Not one of the contestants using Firestone Ground Grip Tires had to use chains at any time and not once were they stuck in the muddy going. The patented Firestone construction features which made this remarkable performance possible are also responsible for making Firestone Ground Grip Tires the most widely-used tire in Rural America. Farmers everywhere know that these remarkable tires last longer than steel lugs, and save 25% in time and up to 33 1/4% in fuel.

Champion Plowmen Choose FIRESTONE GROUND GRIP TIRES BECAUSE THEY ARE THE ONLY TIRES WITH ALL THESE ADVANTAGES:

Triple-Braced Traction Bars can not bend, break or tear off. Each bar extends unbroken from one side of the tire to the other.

52 to 89 Extra Inches of traction bar length give greater earth-biting power.

32% Greater Bar Surface Contact gives increased pulling power, longer wear.

21% Flatter Tread gives greater shoulder traction to bite into soft soil.

Smoother Riding is made possible because the triple-braced traction bars are joined together, and form one continuous contact with ground or road.

Better Cleaning in all soil conditions is made possible by the scientific spacing between the traction bars.

Longer Tire Life is provided by the patented Firestone Gum-Dipping process which counteracts internal friction and heat, protects against penetration of moisture, and provides greater strength to resist the strain of heavy pulling.

Tread Guaranteed Not to Loosen because two extra layers of Gum-Dipped Cords under the tread provide inseparable union between tread and cord body.

Greater Protection against sun and weather is provided by an exclusive weather-resisting tread compound.

See your nearby Implement Dealer, Firestone Tire Dealer, or Auto Supply and Service Store today and learn how little it costs to change over your present steel wheeled tractor and implements and put your farm on rubber.

FIRESTONE PUT THE FARM ON RUBBER

SAFETY PLUS ECONOMY

Firestone CONVOY TIRES
FOR CARS, TRUCKS AND BUSES

The new Firestone Convoy Tire gives you safety, long mileage and blowout protection — new high quality at an exceptionally low price.

AS LOW AS
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Firestone Extra Power Batteries with patented all rubber separators give up to 35% quicker starting — longer life.

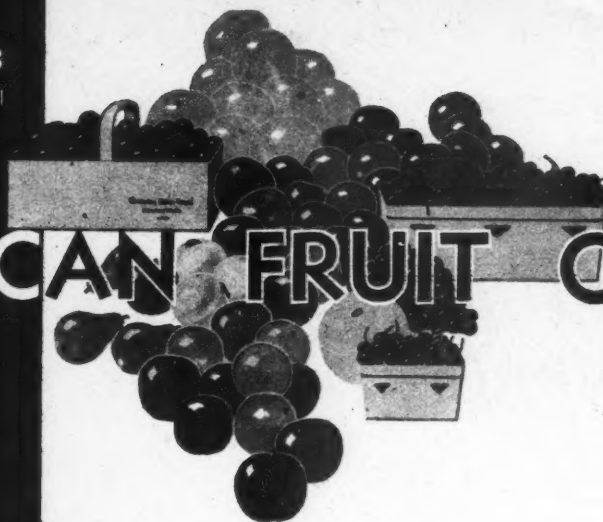


SPARK PLUGS

Firestone Spark Plugs are leakproof and foolproof — give smoother operation and save up to 10% in gasoline.



AMERICAN FRUIT GROWER



The
NATIONAL FRUIT MAGAZINE

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Growers' Exchange*

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AMERICAN FRUIT GROWER

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THE FACTS WARRANT TOLERANCE CHANGE

EARLY this year, apple leaders present at the Cincinnati meeting of the National Apple Institute were heartened by the talk of Dr. R. R. Sayers of the U. S. Public Health Service. At the time, Dr. Sayers pledged continued action of his service on the problem of lead and its effects on humans, with particular reference to lead residue on apples. He cited some of the experiences he and his co-workers had encountered when studying lead poisoning under industrial conditions. As a sound basis for research covering the lead-on-apples problem, he told of plans then already under way to make a study of the situation in the apple producing sections of Washington where the consumption of residue coated apples is probably greater, especially among orchardists' families and other fruit farm workers, than in any other section of the country. Today, medical officers, sanitary engineers, chemists, and medical technicians are making an intensive study of the working environment with regard to lead arsenate spray insecticide and its effects upon health in the apple sections of the State of Washington.

Not all of this special research has been a product of 1938, however. Since July, 1937, the Public Health Service has had in progress a study of the toxicity of lead arsenate when used as a spray insecticide. Actually, this preliminary experimentation served as the groundwork for the present exhaustive Washington tests.

The story of but one phase of the Public Health Service search for facts is a revealing testimonial to the thoroughness with which the work is carried on. Briefly, research workers Lawrence F. Fairhill and Paul A. Neal selected two men in good physical condition. These two men were placed on a diet low in natural lead and arsenic. In their report on this experiment, Fairhill and Neal state:

"One hundred milligrams of lead arsenate were ingested by two individuals over a period of ten days while on a controlled diet. The degree of absorption, path of excretion and toxicity of this dosage were evaluated While the lead arsenate was completely broken down in the body, no untoward effects on the well-being of these two individuals attributable to this quantity (of lead arsenate) were noted. . . ."

Thus, in little more than a year, the fact-finding U. S. Public Health Service produced enough information to permit Secretary of Agriculture Henry A. Wallace to issue his recent statement:

"In the light of this advice (from the Public Health Service) the Department will not institute action under the Food and Drugs Act against fruit containing 0.025 grain per pound of lead, or less. The tolerances for arsenic and fluorine have not been changed."

Through the conscientious work of the Public Health Service, the most important phases of which are still in progress, and subsequent action by the Department of Agriculture, the tolerance for lead on fruit has been changed from 0.018 to 0.025, an epochal step in fruit marketing annals.



Pure as Winter Air

Insure quick smooth starting, perfect lubrication, care-free driving this Winter. Go to your favorite dealer now and change to *Acid-Free Quaker State Winter Oil*. Quaker State's *low cold test* will relieve you of cold weather starting troubles. Its *purity* will free you from worry about sludge, carbon or corrosion. So, to be care-free, make Quaker State your choice. Quaker State Oil Refining Corporation, Oil City, Penna.

Buy *Acid-Free* Quaker State Winter Oil

IT MAKES CARS RUN BETTER
LAST LONGER

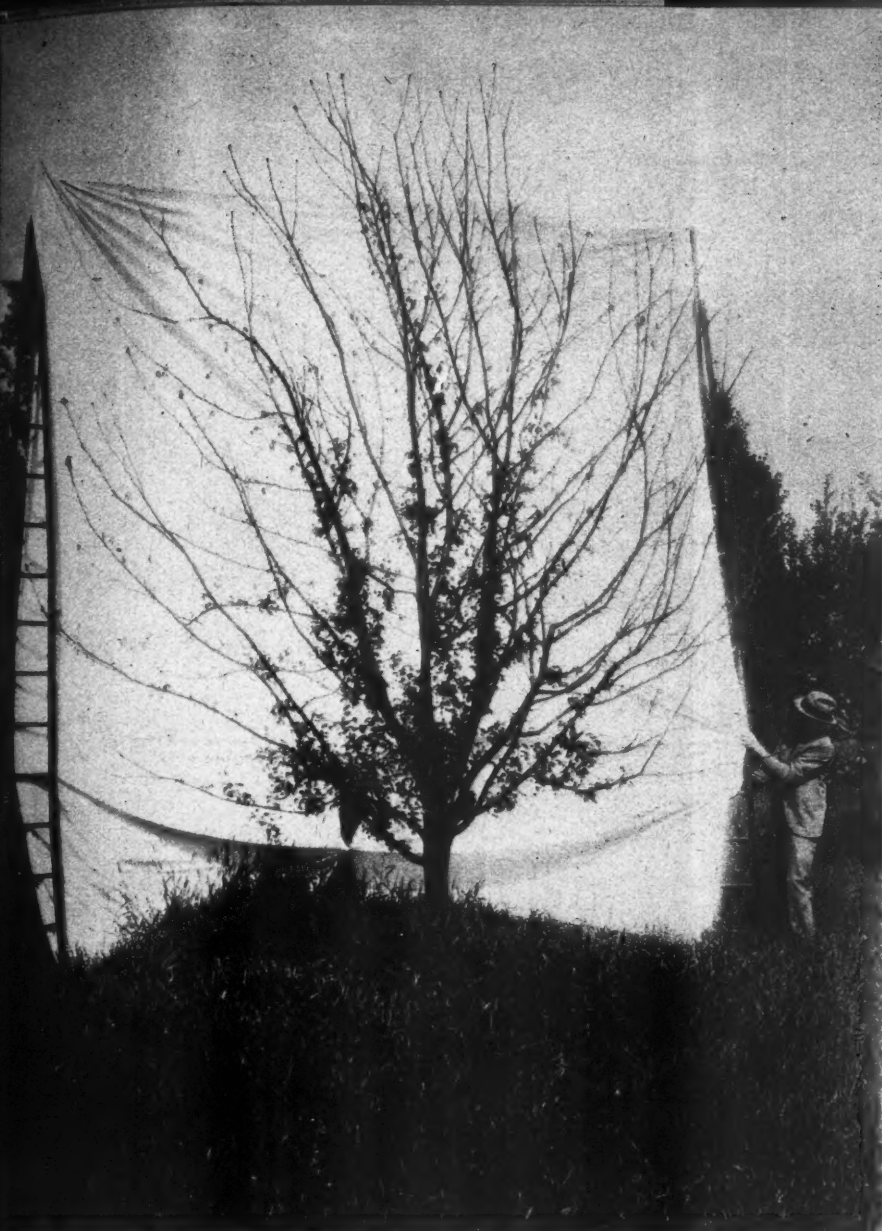


CALENDAR OF COMING MEETINGS and EXHIBITS

- Nov. 3-4—Wisconsin State Horticultural Society, Raulf Hotel, Oshkosh.—H. J. Rahmlow, Sec'y, Madison.
- Nov. 10-12—Iowa Fruit Growers Association, in conjunction with 73rd annual meeting Iowa State Horticultural Society, Savery Hotel, Des Moines.—R. S. Herrick, Sec'y, State House, Des Moines.
- Nov. 11-13—Purdue Student Horticultural Show, Lafayette, Ind.—Horticultural Dept., Purdue University, Lafayette.
- Nov. 16-17—Horticultural Society of Central Illinois, Pittsfield.—L. J. Hagemann, Sec'y, R.R.1, Peoria.
- Nov. 21-22—Horticultural Society of Southern Illinois, Harrisburg.—Hugh Hale, Sec'y, Omaha.
- Nov. 30-Dec. 1—South Dakota State Horticultural Society, Radison Hotel, Aberdeen.—W. A. Simmons, Sec'y, Court House, Sioux Falls.
- Nov. 30-Dec. 1-2—Tennessee State Horticultural Society, in conjunction with American Pomological Society, Hotel Patten, Chattanooga.—G. M. Bentley, Sec'y, Knoxville.
- Dec. 1-2—Kansas State Horticultural Society, Topeka.—Geo. W. Kinkead, Sec'y, Topeka.
- Dec. 2-3—Montana Horticultural Society, Kalispell.—G. L. Knight, Sec'y, Missoula.
- Dec. 5-7—Washington State Horticultural Association, Chamber of Commerce, Yakima.—J. C. Snyder, Sec'y, Pullman.
- Dec. 6-8—Michigan State Horticultural Society, Civic Auditorium, Grand Rapids. H. D. Hootman, Sec'y, East Lansing.
- Dec. 6-8—Oregon State Horticultural Society, Eugene.—O. T. McWhorter, Sec'y, Corvallis.
- Dec. 6-8—Virginia State Horticultural Society, Winchester.—W. S. Campfield, Sec'y, Staunton.
- Dec. 7-9—Nebraska State Horticultural Society, Plant Industry Building, Agricultural College Campus, Lincoln.—E. H. Hoppert, Sec'y, Lincoln.
- Dec. 7-9—New Jersey State Horticultural Society, Hadden Hall, Atlantic City.—A. J. Farley, Sec'y, New Brunswick.
- Dec. 14-15—Horticultural Society of Northern Illinois, LeClair Hotel, Moline.—O. H. Waddell, Sec'y, Davis Junction.
- Dec. 14-16—Peninsula Horticultural Society, Dover, Del.—T. F. Manns, Sec'y, Newark, Del.
- Jan. 3-4—Maryland State Horticultural Society, Frederick.—A. F. Vierheller, Sec'y, College Park.
- Jan. 4-6—Illinois State Horticultural Society, Carbondale.—J. B. Hale, Sec'y, Kell.
- Jan. 4-6—Massachusetts Fruit Growers Association, in conjunction with Union Agricultural meetings, Worcester.—W. R. Cole, Sec'y, Amherst.
- Jan. 10-12—Indiana Horticultural Society, Purdue University, Lafayette.—R. L. Winklepleck, Sec'y, Lafayette.
- Jan. 10-13—New York State Horticultural Society, Rochester.—Roy P. McPherson, Sec'y, LeRoy.
- Jan. 17-19—Maine Pomological Society, Augusta.—E. L. White, Sec'y, Bowdoinham.
- Jan. 17-19—State Horticultural Association of Pennsylvania, in conjunction with Pennsylvania Farm Show, Harrisburg.—J. U. Ruef, Sec'y, State College.
- Jan. 25-27—Eastern meeting New York State Horticultural Society, Kingston.—Roy P. McPherson, Sec'y, LeRoy.
- Jan. 30-Feb. 1—Ohio State Horticultural Society, during Farmers' Week, Ohio State University, Columbus.—F. H. Beach, Sec'y, Columbus.
- Feb. 1-2—West Virginia Horticultural Society, Market House, Martinsburg.—Carroll R. Miller, Sec'y, Martinsburg.

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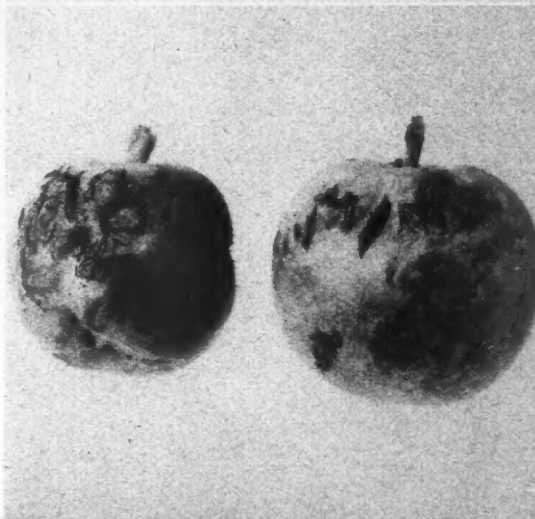
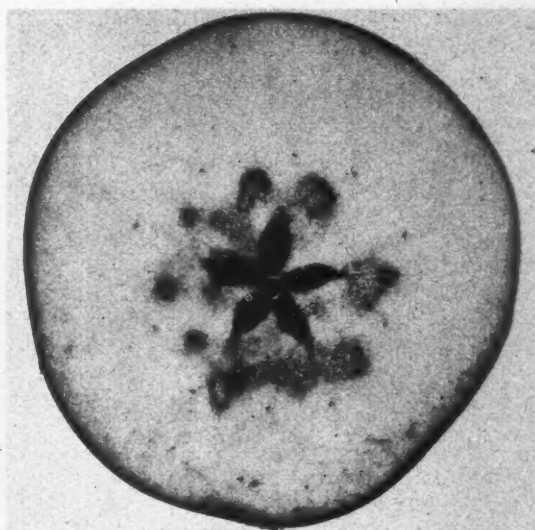


Left—An extreme case of dieback and rosette in Duchess of Oldenburg apple tree. Smaller trees, equally severely affected, have recovered following use of boron.

Below, top—Internal cork of late season type in Baldwin apple. Note that lesions are more nearly continuous and entirely different in position from those in stippen.

Center—External cork in McIntosh. Often called drought spot.

Bottom—Internal cork in Fameuse apples. A mild case originating relatively early in the summer as indicated by distortion of fruit.



DOES YOUR ORCHARD NEED BORON?

By A. B. BURRELL
Cornell University

EIGHTY-ONE years ago two German scientists reported the chemical element, boron, to be a constituent of a certain Abyssinian plant. About 75 years ago fruit growers in the Lake Champlain Valley of New York noted the internal cork disease in Snow apples. At last, a relation between these two apparently unconnected observations has come to light. Boron will control the cork disease which destroys apples in scattered orchards in America, Europe, Asia, Australia, and New Zealand.

But before employing this control measure, the fruit grower must learn the various symptoms of the boron deficiency disease, learn to distinguish it from other diseases, and

learn the danger of using wrong methods and excessive applications.

Boron is a chemical element like nitrogen, potassium, and phosphorus. It does not commonly occur in the pure state. The common commercial sources of boron are borax which contains 11.34 per cent boron, and boric acid with 17.49 per cent boron. Its importance to plants was long overlooked because of the extremely small amounts required.

Boron deficiency in apples produces two major fruit symptoms and two major tree symptoms. In the fruit, the most widespread is called internal cork, which is characterized by rather large masses of dead brown cells at

(Continued on page 16)

SAVE THE CHAINS

- **PATMAN BILL**
- **IS NOT ONLY A**
- **CHALLENGE TO**
- **THE CHAINS BUT**
- **TO THE ENTIRE**
- **FRUIT INDUSTRY**
- **OF AMERICA**

By DEAN HALLIDAY

WHEN the biggest problem facing the fruit industry is distribution and marketing there should be no pussyfooting about rallying to the support of the chain food stores in their fight against the Patman bill.

The bill will be introduced in the next Congress in January. If it is permitted to become a law it will tax the chain stores out of business. If the chain food stores are put out of business the fruit industry will receive a staggering setback. At one fell swoop growers will be deprived of 37,000 retail outlets. That is not all! The fruit industry will lose the benefit of chain store organization and machinery for mass handling of fruit crop surpluses. Lost, too, will be the avalanche of advertising which the chain stores can create, almost overnight, to help sell more fruit. And gone in the wind of Congressman Patman's punitive propaganda will be the merchandising, marketing advice, and assistance extended by chain store experts in recent years to the fruit industry which so sorely needed it.

AMERICAN FRUIT GROWER therefore urges all growers to think twice before they permit the closing of 37,000 retail outlets—the CHAIN FOOD STORES which form a MAIN LINK between the fruit grower and consumer.

The oldest and the largest of all the chains—the A & P—has taken the lead in bringing the facts in this fight to the public. Elsewhere in this issue the A & P's "Statement of Public Policy" is published. Read it! It is one of the frankest, fairest statements ever made to the public. The very restraint of the language

"Having been greatly benefited by the aid so freely and cheerfully extended by the Food Chains, and having found at the same time a solid, appealing basis for mutual co-operation between growers and grocers . . . We, the National Apple Institute, through apple advertising commissions and institutes and State Horticultural Societies, appeal to our business allies—the Chain Grocers—to continue this mutual co-operation which has been so helpful to the apple growers of the nation and which we trust and believe has also been helpful to the grocers."

Kirk L. Keller, Pres., National Apple Institute.



"We must realize that all groups of producers, all groups of manufacturers, are organizing for the same purpose—to create greater consumer demand for their products. If we are to hold our own or regain for apples some of the consumption that we have lost, we must offer a united front. That this is equally a national problem is recognized. We in New York and New England have encouraged the formation of co-operative groups in the other apple producing areas. We have joined all other areas in co-operating with the National Association of Food Chains in an effort to move our crop of apples nationally."

John Lyman, Pres., New York and New England Apple Institute.



"The report of the Chain stores on the National Apple-A-Day campaigns, while briefed to the limit, will give to close examiners an idea of the really tremendous apple selling aid the Chains put forth for us. The Chains gave apples advertising in full pages, half-pages, part pages. We have shown something of this, from our own files, to a number of grower meetings. This was in the grocer's own space. The Chains estimate total advertising—newspapers, radios, handbills and such—to be about two million dollars. After looking over their scrap books at their headquarters we are about ready to agree."

Carroll R. Miller, Sec'y-Mgr., Appalachian Apples, Inc.



" . . . It was my privilege, with several other growers from this section, to meet with the fruit buyers of several of the large chain stores in New York City . . . It was one of the most interesting meetings I have ever attended. Seven or eight chains were represented. They said the greatest handicap of New York apples has been poor grading . . . They are sure the consumption of New York apples can be increased by advertising and by co-operation between grower and distributor . . . The CHAIN STORE is the main link between the producer and consumer. They want to handle home grown apples, but must have a good product of uniform quality and of uniform size in the boxes."

James G. Case, Sodus, N. Y., Fruit Grower.



IF YOU WOULD SAVE YOURSELVES!



• THINK TWICE BEFORE YOU PERMIT THE DOORS • • TO BE CLOSED ON 37,000 RETAIL OUTLETS •

used in setting forth its arguments will impress you.

Nor, as Godfrey M. Lebharr, editor of *Chain Store Age*, points out, will the A & P have to carry on the fight alone. "The other chains," he says, "are similarly prepared and equally determined to tell their story to 'all of the American people.' No doubt that story has already been delayed too long in the telling, but be that as it may, now at last it *will* be told."

There are many aspects to this fight. From the consuming public's standpoint there is the justified fear of higher retail prices if the chains are legislated out of existence. There is also the labor side, since there are approximately 900,000 workers directly employed in the chain store industry. The interests of the farmer, as well as the fruit grower, must also be considered inasmuch as approximately 30% of all farm produce is marketed through the chain food stores, while the other 70% is handled through individual grocers. As George L. Hartford and John A. Hartford, the brothers who head the

A & P system, point out, "it is obviously unfair to the farmer to propose legislation which would, at a single blow, wipe out 30% of his distributing machinery—and that 30% the part which maintains the price to the farmer (and the fruit grower) yet reaches the public at low cost because of economical distribution."

"It would be just as unfair to the farmer," it is pointed out, "to propose putting out of business all of the individual grocers of the country who distribute 70% of his produce. Both chain food stores and individual grocers perform a distributive function vital to the interests of the farmer. If either failed to function, the farmer (and the fruit grower) would be faced with tremendous surpluses and heartbreaking losses."

This fight to maintain what might well be termed the "Magenot Line" of distribution comes just at a time when fruit growers, particularly the adherents of King Apple, have been getting their feet upon common ground in the matter of advertising and marketing, assisted by the al-

most heroic efforts of their sectional association leaders, who, in turn, have found strong and willing allies in the chains.

John A. Logan, executive vice president of the National Association of Food Chains and a friend of fruit growers, points out that "because of several complicating factors, particularly during the past decade, the apple marketing situation seemed to grow progressively worse for several years. Then last year, faced with a bumper crop, intense competition of other fruits, and a downward spiral of consumer purchasing power, the organized apple producers decided it was time for concerted action—time for a determined start towards bringing more order and greater stability into the picture."

"They appealed," he says, "to the organized retail groups for special merchandising assistance, which was pledged. Out of the chain food stores' efforts some lessons were learned, which are set out in a Report on 'National Apple-A-Day Sale,' submitted
(Continued on page 17)



Night photograph of heavily laden grapefruit tree in Rio Grande Valley. To study better processing of citrus fruits, a new Federal Laboratory has been established at Weslaco, Tex.

CITRUS

CANNING LABORATORY

To better meet problems of citrus canners in the Lower Rio Grande Valley of Texas, a new Federal laboratory has been established at Weslaco. Since the processing of citrus has boomed to a great volume in this area during recent years, there has been a need for experimentation and research such as is being provided by the laboratory. Established on the Hidalgo County Substation farm of the Texas Agricultural Experiment Station in 1932, the laboratory has been known as the U. S. Citrus Products Station. Its new name is U. S. Fruit and Vegetable Products Laboratory.

Probably best known accomplishment of this relatively young institution is improvement in grapefruit juice canning. Through research carried on by staff members under the direction of J. L. Heid, old methods of grapefruit juice canning

which often left the canned juice scorched and bitter have been replaced by improved methods for reaming, screening, deaerating, flash pasteurizing, and quick cooling.

SALES PROPOSAL

Since early this year there have been discussions in citrus circles regarding the possibilities of selling oranges by weight rather than by units. Now definite steps have been taken to give the plan a trial this season.

Advocates of the plan say that the unit method for selling citrus is nothing more than a reflection of the "trade customs." They maintain that since the open sugar barrel, the pint, the quart, and other measures of country store days have succumbed to weight standards, good retailing demands sale of citrus fruit in the same manner.

Market investigators who have studied the situation have produced figures which reportedly show that citrus marketing by units can be profitable only for small-sized fruits. They add that if larger size fruit is

sold by weight there would be greater monetary returns for growers and distributors while consumers would receive more value for money spent.

QUINCES

TO SET MORE STOCK

So dangerous have become fire blight and oriental fruit moth risks that the bushy, slow-growing quince tree has almost become extinct from commercial orchards of the nation. Prized for its high pectin content and exclusive flavor, the quince, although meeting a good demand where available, has lost its marketable prestige through absence alone. But at Waterport, N. Y., Harry L. Brown is producing quinces and doing it profitably. He's so convinced of the future for quinces that new stock is being set on the Brown orchard.

"If blight is prevalent," he says, "we get it. Years ago we used to cultivate exclusively, but we have discontinued that practice. Quinces are subject to late frost. We have quinces on the east and west sides of a 28-acre block of woods. A year ago the frost took the west side but did not affect the east side. We spray with lime-sulphur and follow after the calyx with Bordeaux. Quinces are very susceptible to russetting by Bordeaux."

To combat the oriental fruit moth, Brown makes three applications of lead arsenate. The fruit has to be washed with this program, but 90 to 100 per cent clean fruit is obtained. Four or five pounds of lead arsenate are used for each 100 gallons of spray in the moth-control applications.

Principal variety in the Brown quince planting is the Orange. In his locality, Champion takes such a long season that it does not ripen.

Most of the quinces are sold to processors, Chicago being the principal market. Mr. Brown relates that years ago the processors purchased mixed cars of apples and quinces, but this practice is no longer followed. Fruit two and a quarter inches and up is packed in bushel baskets. Prices at Chicago, he says, range from 50 cents a bushel for culls to \$2.50 for fancy grade. The yield of quinces, Mr. Brown has found, is usually about half that of apples, although the quinces are planted 20 feet apart or about 100 trees to the acre. Last year this orchard averaged 312 bushels of apples to the acre and 120 bushels of quinces. Cost of production of both fruits is about the same.

PEACH ORCHARD DEVELOPMENT

So interest-compelling was a talk on the peach situation by M. A. Blake of the New Jersey Agricultural Experiment Station before the Virginia Horticultural Society meeting that it has been digested in the following article.—EDITOR.

THE history of the commercial peach industry in America reveals that during certain periods of years extensive plantings of trees are made, following which more peaches are produced than can be sold at profitable prices. In contrast, at certain intervals one or more factors result in a serious reduction in trees.

Peach growers in the East and Middle West have recently experienced a combination of exceptionally severe droughts and unusually low winter temperatures. These unfavorable influences occurred here and there from about 1931 to 1937 and greatly reduced the number of sound, healthy peach trees.

The previous "low" in numbers of peach trees in the East occurred when the San Jose scale eliminated peach orchards by the wholesale, from about 1900 to 1905.

Whenever an industry experiences severe hardship and depression, marked changes are commonly associated with its emergence. Previous to the introduction of the San Jose scale, peaches were largely produced as a general farm crop in the East.

The peach became a special crop when dormant season spraying for the scale and summer spraying and dusting to control peach scab and brown rot were found necessary. These diseases were serious before the scale was introduced but nothing much was done about the problem. When it became necessary to spray to prevent actual destruction of trees it also became important to reduce and control other harmful factors.

At the close of the nineteenth century the so-called Persian type varieties, including Early and Late Crawford, Mountain Rose, Oldmixon, Champion, Reeves, and Smock, were most popular in the Middle Atlantic states. When replanting began in earnest following extensive destruction of orchards by the scale, many trees of Greensboro, Waddell, Carman, Belle, and Elberta were planted. The Chinese Cling type peaches rapidly came to the front, and the Persian type rapidly waned in popularity. It was commonly said at the time that the cause of this change was the lack of hardiness of the Persian type varieties. This was true to

some degree, but Oldmixon, Champion, Smock, Crosby, Kalamazoo, and others, were actually hardier than Elberta, the most popular variety of the Chinese Cling type.

The Persian type varieties of that period which were hardly produced a rather large proportion of small fruits. Furthermore, the fruits varied considerably in size and time of maturity upon the same tree and also from season to season. The fruits of most of the Persian type varieties also softened quickly at maturity and possessed thin, tender skins. Peach varieties with these characteristics did not meet the requirements of the new twentieth century.

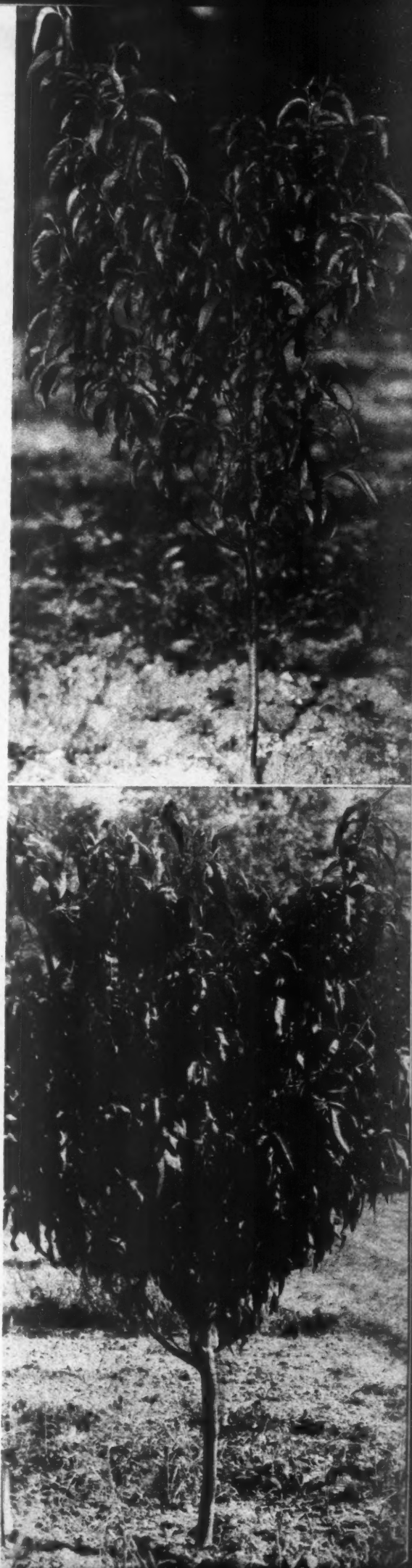
Since the peach industry is again just emerging from the effects of severe hardships and a marked reduction in numbers of trees we may well ponder the situation. The tempo of modern civilization has become greatly accelerated over the old. The sheer physical power and energy which one man may control and bring to bear in his work has been multiplied many times in the last quarter century. We think, work, market, travel, and associate in much larger units than formerly. Great developments have taken place in recent years in orchard equipment and tools. New pests have appeared. Spraying equipment and materials undreamed of 30 years ago are now in common use. New sources of plant nutrients have been found, and new varieties developed by scientific breeding. Such changes require more knowledge, greater capacity for thought and ability to plan and direct, better organization of a business, and more endurance to withstand mental stress and greater financial outlay.

The changes previously mentioned, together with others, have greatly added to the burden of the grower's supervision and conduct of his business. He finds that he needs at times to act in the following ca-

(Continued on page 18)

Peach trees that make poor growth in the beginning are more seriously affected by pests, says M. A. Blake. Tree in above photo making poor growth in early summer, while lower illustration shows same tree four months after application of fertilizer.

AMERICAN FRUIT GROWER



APS

A PAGE CONDUCTED IN THE
INTERESTS OF THE AMERICAN
POMOLOGICAL SOCIETY

SPEAKERS OF NATIONAL REPUTATION ON PROGRAM OF ANNUAL MEETING

PLANS have been completed for the annual convention of the American Pomological Society which is to be held at Chattanooga, Tenn., November 30, December 1-2. The Tennessee State Horticultural Society is the host and its officers have co-operated with the APS officers to arrange a program of wide appeal to horticulturists. Speakers of national reputation, including Dr. Lee M. Hutchins, senior pathologist, U. S. Bureau of Plant Industry, Washington, D. C.; Dr. H. P. Stuckey, director, Georgia Experiment Station, Experiment, Ga.; Dr. A. A. Nikitin, Tennessee Copper Co., Copper Hill, Tenn.; W. S. Campfield, secretary, Virginia State Horticultural Society, Staunton; and Dr. Oliver I. Snapp, U. S. Bureau of Entomology and Plant Quarantine, Fort Valley, Ga., have been secured to discuss problems vital to fruit growers.

The themes for discussion are those problems which are squarely facing the fruit industry:

1. Consumer-grower relationships.
2. Dealer-grower relationships.
3. Low-grade fruit.
 - a. Improving the grade of fruit on the tree.
 - b. Better handling from tree to consumer.
 - c. Legal aspects of controlling marketing of low grades.
 - d. Utilizing low grades to produce non-competitive products.
4. The variety situation.

The variety question is wide open again. Growers feel that the time is ripe to make moderate replacement plantings, but what to plant is an open question, especially in view of the fact that many new varieties have been introduced during the last two decades.

The trend in apple variety planting, both nationally and sectionally, has been revealed in the variety survey conducted by AMERICAN FRUIT GROWER and analyzed in the October Planting Issue. The information contained in this survey will prove invaluable to those growers who are planning replacements or new plantings of apple trees.

An open forum—a free-for-all discussion—will be the place to cuss and discuss fruit varieties, both new and old. Many new varieties are making a bid for a place on the planter's list, and a considerable number of growers have made test plantings, so that there is now available quite a bit of grower experience which can be related at the meeting.

The American Pomological Society came into being in 1848. Fruit growers of that era saw the necessity of getting together a body of information concerning the many varieties then grown. For many years the central theme at the APS convention was varieties. The famous APS catalog of fruits was issued, in which thousands of varieties and many kinds of fruits were listed. This was a monumental work, and it served as an authoritative planting guide for many years.

Following this era of variety standardization, the APS took a nap, because no pressing objectives presented themselves. Fruit growing was emerging from the pioneer stage into a full fledged and important industry. The problems were those of production, pruning, spraying, soil management, etc., and the experiment stations were engaged in research along these lines.

National Problems

About 10 years ago it became apparent that the APS could be of service in bringing concerted action into being that would be effective in handling national problems. Dr. J. C. Blair, head of the Department of Horticulture at the University of Illinois, Urbana; Prof. B. S. Pickett, Ames, Iowa; Prof. C. P. Close, extension horticulturist, U.S.D.A.; Prof. T. J. Talbert, Columbia, Mo.; and fruit growers like W. S. Perrine, Centralia, Ill.; Robert Simpson, Vincennes, Ind.; Paul Stark, Louisiana, Mo.; A. Grant Fox, Normandale, Ontario, Canada, and many others insisted that the American Pomological Society, as a national organization, could serve horticulture as could no other local group. Influential state societies which gave active support to the APS included Illinois, Ohio, Wisconsin, Indiana, Virginia, Connecticut, Massachusetts, Iowa, Nebraska, Missouri, Washington, and Oregon.

Dr. Blair served for two years as president prior to President B. S. Pickett's election, and these two heads have come together on numerous occasions during the past 10 years to crystallize many of the ideas which have put action into an effective program. First it was a successful upward revision of the lead residue tolerance, then the national advertising campaign was struggled into being, and this promises to do for deciduous fruits just what it has done for citrus fruits.

Last year the U. S. Public Health Service set aside a considerable sum of money for the purpose of research to determine the status of spray residues as related to public

health. This was done upon the urgent request of the American Pomological Society.

Annual Meetings and Reports

The APS has held its annual meetings for a number of years in joint session with the various state horticultural societies, at their invitation. These meetings have been very successful. Such co-operative effort has led to the development of strong and stimulating programs, which have been a means of attracting fruit growers from near and far. The proceedings of each of these meetings has been published and distributed to the members.

Committees Have Been Active

Notable among the contributions of the society is the work of the several committees. The work of the Spray Residue Committee headed by Dr. W. A. Ruth, Urbana, Ill., has been responsible for several authoritative contributions which were published in the proceedings of the Connecticut and the Virginia conventions. Dr. M. J. Dorsey, also of Urbana, has headed the committee on the Code of Nomenclature. The code has been revised and brought up-to-date. The Committee on New Fruits and Nuts, headed by Prof. C. P. Close of the U.S.D.A., Washington, D. C., has contributed an authoritative new fruits list each year which is published in the reports of the society.

These committees of the APS have been responsible for bringing together a fund of information dealing with problems that are not of a state or regional interest, but which are of national importance to the fruit industry.

Allied Industries

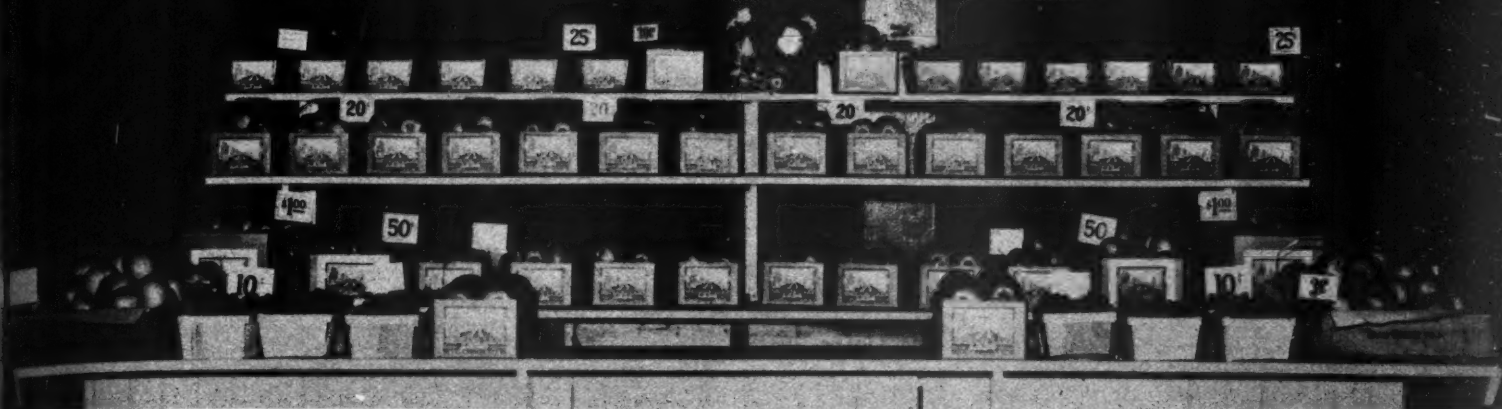
The allied industries have generously supported the joint meetings by their participation in the way of purchasing concessions and maintaining ably manned exhibits of orchard supplies. Their exhibits have been invaluable in acquainting growers with the latest developments in machinery and supplies which are indispensable in growing fruits. A fine and cordial relationship has developed between these industries, fruit growers, and horticulturists. In addition, the allied industries have purchased advertising space in the APS reports and their support has been a very material assistance in financing the publication of these reports.

A good convention program awaits you. There will be a fruit show, and the allied industries will be on hand with exhibits. The fine hospitality of the Tennessee State Horticultural Society and Chattanooga will make your visit a memorable one.

H. L. Lantz
SECRETARY

ORCHARD LANE Drive in

XENIA, O.



FAIR SALES..

For years, thousands of patrons in all sections of the country have sought to purchase the fancy, eye-appealing fruit on display at state fairs. Last year a group of enterprising Ohio growers submitted a plan for sales booths as a part of the extensive fruit exhibit at the Ohio State Fair. Officials were in accord with the idea and this year there were three competing sales booths at the fair. After judging, the fruit was sold from the booths and the growers reported such good business that other growers are already planning to enter sales booths in next year's competition. Most state fairs feature fruit displays. Besides benefits afforded growers by this competition, a wealth of advertising is provided through display of quality fruit.

J. B. Lane's prize-winning sales booth is shown above while at the left Mrs. Lane sells an attractively-labeled cardboard basket of McIntosh. Much attention was centered on Tom White's table display, left, which took first honors. At left, below, Mr. White is seen using an apple and pear cutter so customers may sample the fruit offered at his sales booth. And he's handing out Ohio Apple Institute recipe booklets with the other hand. In photo below, one of Mr. White's workers is shown making up consumer-size cardboard baskets in the truck.



How SHERWIN-WILLIAMS S

SCIENTISTS OVER THEIR TEST TUBES
AND EXPERTS WORKING IN THE FIELD
PROVE S-W SPRAY AND
DUST MATERIALS PRODUCE

Better Fruit

WHEN you open a package of S-W spray or dust materials you see before you a compound which is the end result of persevering scientific study, search and research, laboratory and field tests carried on by a small army of scientists and experienced horticulturists ceaselessly working in order that The Sherwin-Williams Company can help the fruit growers of the nation solve their spraying and dusting problems—efficiently, effectively and economically.

Back of each container of S-W spray and dust materials is the story of scientific research which is carried on, year in and year out, by The Sherwin-Williams Company as a part of its responsibility to the fruit growing industry.

As the world's largest producers of spray and dust materials, The Sherwin-Williams Company is constantly seeking better, lower cost methods for the control of orchard pests. This company spends many thousands of dollars each year in research, development and testing.

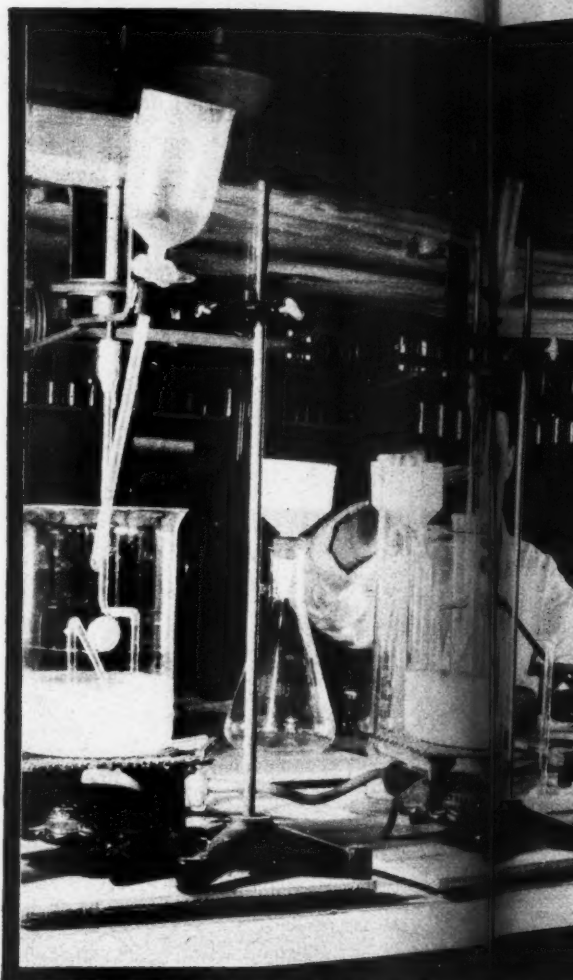
Many different industries, located

in this country and throughout the world, furnish the raw materials used by Sherwin-Williams in the manufacture of insecticides.

Some of these materials are: Arsenic, lead, zinc, copper, sulfur, tar acids, nicotine, oils, rotenone, lime, nitric acid, acetic acid and sulfuric acid.

In the Sherwin-Williams plant at Bound Brook, N.J.,—the largest producing single insecticide plant in the United States—is carried on a thorough program of chemical research work.

At Oakland, Calif., also The Sherwin-Williams Company maintains another great plant for the manufacture of insecticides. Here, too, is a special Research Laboratory under the direction of efficient chemists who work in direct cooperation with The Sherwin-Williams Field Laboratory at Yakima, Washington, where under the supervision of an accredited chemist and entomologists various arsenate of lead combinations are tried out. Valuable practical information of benefit to growers is developed by this re-

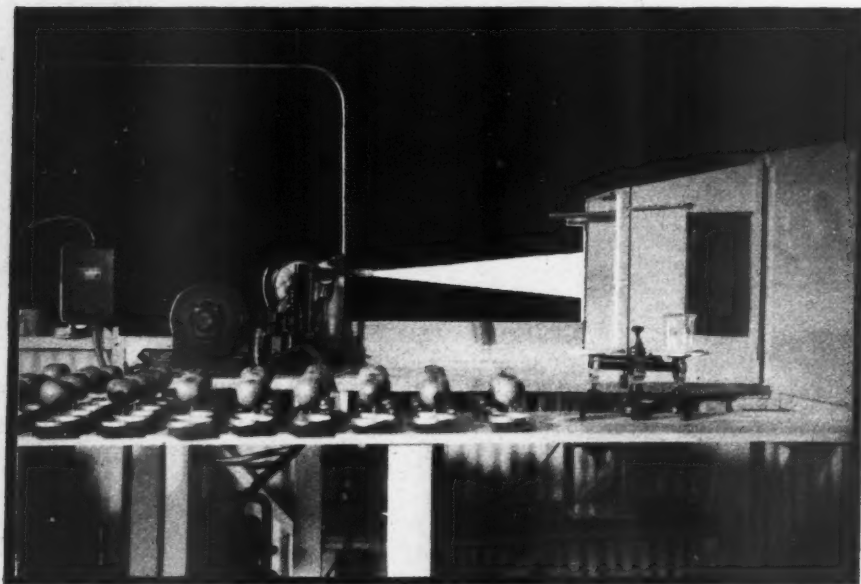


S-W Science Solves Your Spray and Problems.

search into better methods of controlling codling moth by the use of arsenate of lead with stickers and spreaders, as well as improved methods of washing spray residue from apples.

In addition to the research programs which are carried on constantly in its own laboratories, it is the policy of The Sherwin-Williams Company to establish Insecticide Fellowships at many of the leading experiment stations where it is advisable to try out new compounds and get an impartial study and report of the efficiency of these materials.

Under a Sherwin-Williams Insecticide Fellowship established three years ago at Ohio State University, Columbus, Ohio, new work is being conducted to safen arsenate of calcium for use on certain fruits and vegetables as well as new work

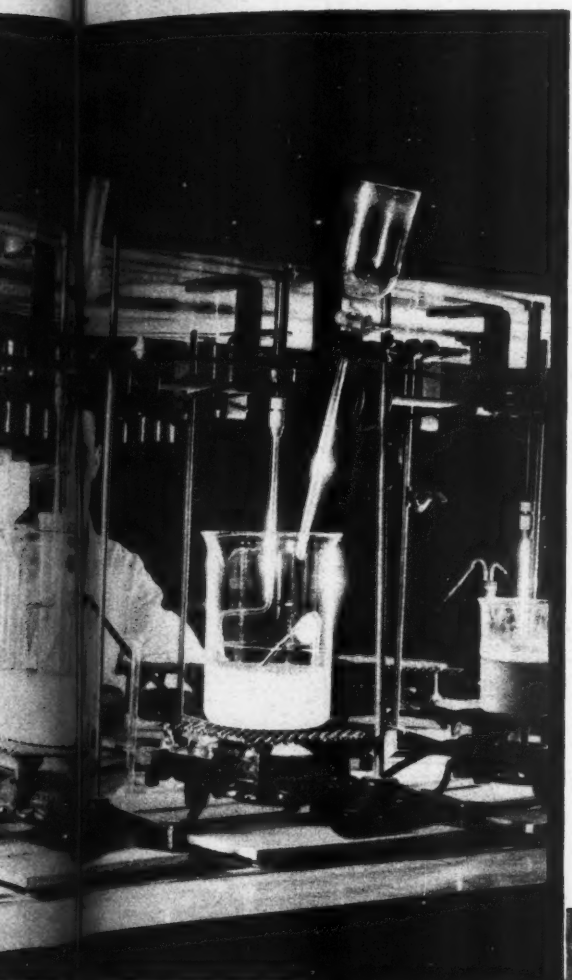


Precision spraying equipment used in Sherwin-Williams laboratories to test covering and deposit forming properties of S-W insecticides and fungicides.

SEVES 141,418 FRUIT GROWERS-
(U.S. CENSUS FIGURES)

Including You!

**THROUGH S-W FELLOWSHIPS IN
STATE COLLEGE LABORATORIES
SCIENCE SOLVES YOUR
SPRAYING PROBLEMS**



on copper arsenate compounds. A special study of photo-synthesis is also being carried on to determine with scientific accuracy the effects of certain insecticides and fungicides upon foliage of fruit trees.

At the Michigan State College Agricultural Experiment Station field experiments have been conducted for several years under a Sherwin-Williams Fellowship to determine the

value of basic copper sulfate in the control of cherry leaf spot. Special experimental work is also being done on the use of basic copper sulfate on potatoes and celery.

In addition to the scientific tests in its own many laboratories, and under its special Insecticide Fellowships, The Sherwin-Williams Company also works closely with all experiment stations in the country and submits samples of new and promising S-W insecticides and fungicides for impartial study and testing.

These facts are worth remembering for two reasons:

1. They show that pest control is a mutual problem and that what is in the best interests of the grower is also of benefit to The Sherwin-Williams Company as the world's largest producers of spray and dust materials.

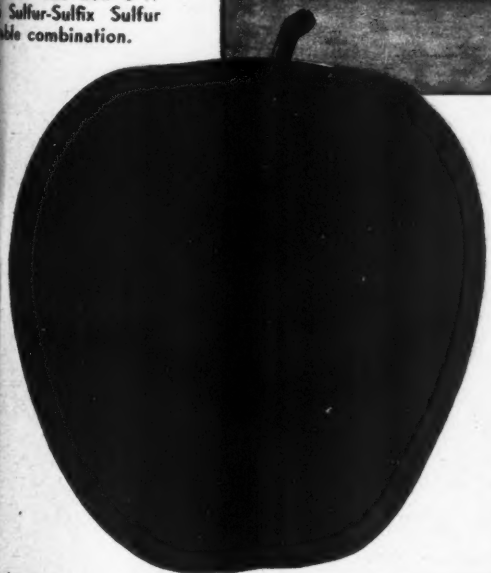
2. They show why each Sherwin-Williams Spray and Dust material represents the utmost in effective pest control with safety and at the lowest possible cost for the materials you use.



ray and Problems.

Use equipment properly in orchard experiments conducted by Michigan College Experiment Station cherry leaf spot under auspices of Williams Fellowship.

Rich and Fine Color. Fruit of an Illinois-grown Sprayed throughout with the new S-W Sulfur-Sulfix Sulfur combination.



Consult the S-W Horticultural Advisor

Sherwin-Williams maintains a staff of Horticultural Advisors to aid growers in planning pest and disease control schedules and to give scientific, practical and impartial advice

on any special spraying or dusting problem. This service is FREE, and we urge you to write to us regarding your pest control problems at any time. Address HORTICULTURAL ADVISOR.



THE SHERWIN-WILLIAMS CO.

Insecticide Department

101 Prospect Ave.

Cleveland, Ohio

STATE NEWS

TENNESSEE—Ralph McUmbert of Greenfield is an A No. 1 fruit grower, but he had never entered fruit in competition such as the State Fair affords. He won his spurs this year against stiff competition. He sent 140 selected Golden Delicious apples to the Fair, marked for entry in the six-tray, three-plate, and single-plate classes. Every apple was used, and his careful selection and preparation won for him two blues and a red ribbon, which carried \$15 in premiums.

Transparent trees are ambitious. J. W. Savely, a fruit grower from Hendersonville, states that one of his Transparent trees which was stripped by frost in April, now (September 24) bears 40 to 50 apples just under two inches in diameter. A similar report came from Shelbyville, but we ate the evidence.

On the program of the State Horticultural Society-American Pomological Society merger meeting (see page four for dates) will be some of this country's most prominent horticultural leaders. Technical subjects will be handled by speakers from the APS roster as well as members of the staffs of Federal and State experiment stations. Dr. O. I. Snapp, in charge of Federal Peach Insect Laboratory, Fort Valley, Ga.; W. S. Campfield, secretary of Virginia State Horticultural Society, and Carroll R. Miller, who heads the National Apple Groups, are among our first scheduled speakers.—A. N. PRATT, State Horticulturist, Nashville.



TEXAS—Spurred by sales increases of more than 250 per cent as a result of last season's advertising campaign, the Rio Grande Valley Citrus Exchange at Weslaco will expand its second national promotional program for Texusun and Tex-Maid grapefruit and oranges, it is reported. Last season's advertising in 18 major markets will be extended to 37 cities from coast to coast.

Newspapers, outdoor, radio, and point-of-sale aids will be utilized in the fresh fruit campaign. Canned fruit juices will be advertised in the same markets starting in March, at which time magazines will be added.

MINNESOTA—Prices for Minnesota apples this year were better than for many years. The crop, averaging about one-third normal production for the State, moved as fast as it could be picked at \$1.50 to \$2.25 for top grades, according to variety, with Delicious bringing the best prices.

Among the newer apples that showed up well this fall were Beacon, Cortland, Minn. No. 724, Wedge, Minn. No. 1007, and Perkins. Beacon is an early, highly colored red apple that seems likely to replace much of the Duchess in Minnesota orchards. Cortland continues to create a favorable impression. Dr. W. G. Brierley of University Fruit Breeding Farm believes this variety finishes better in Minnesota than in New York State, judging from eastern samples seen here.

Minn. No. 724 is a Mackintosh type that has shown up well for several years at the University Farm. A number of leading growers are top-working trial lots. Wedge is a large, well colored apple that comes in right after Wealthy and is particularly good for baking. It is proving to be a good seller on the Twin City market for the limited quantity

PAGE 14

now available, which undoubtedly will stimulate further planting of this variety. Perkins is an older variety that never made much progress because of trunk weakness but it may be worthy of further attention for top-working as it is well colored and an attractive late winter apple.—J. D. WINTER, Sec'y, Mound.



NORTH CAROLINA—Marketing conditions in the Southeast are to be studied by State and Federal agencies, with the end in view of providing farmers with better methods of marketing fruits and vegetables, reports Dr. I. O. Schaub, acting director of the Agricultural Experiment Station at State College.

Agricultural economists who have been considering the problem now confronting fruit growers and truckers are convinced that well planned markets located at key points would give the growers a decided advantage over the present haphazard methods of moving their products to the consumer.

Under the plans as outlined at present, daily reports from all markets would be made available at each point to show the day-to-day trends in supply, demand, and price over the Southeast and in the northeastern primary and terminal markets.

Proposed key points would be central places where growers could haul their produce for sale to buyers who would then ship by rail, truck, or boat, as they preferred, to distant markets.

The study will be conducted by the U.S.D.A. in co-operation with agricultural experiment stations at North Carolina State College, Clemson College, the University of Georgia, and Auburn, Ala. S. L. Clement, agricultural economist, will represent the North Carolina experiment station.

ILLINOIS—Programs for the annual district society meetings (see page four for dates) have been arranged to fit the requirements of the section included in each particular district. The 83rd annual meet of the State society (see page four) will be held in the heart of one of the largest fruit producing areas in the State. Many persons prominent in horticulture will take part in the program.—JOE B. HALE, Sec'y, Kell.



MICHIGAN—"I look at the props supporting the branches of my well-loaded Golden Delicious apple trees as business men observe graphs. The more my orchard resembles a forest of props, the more I am assured of a merchandising problem. I solve this problem through careful survey of the market conditions and enjoy thereby the reputation of being a successful orchardist."

Such is C. C. Taylor's philosophy and business policy, and his Ne-Ru-Bar orchards at Albion with their clean fruit are proof that he knows the cultural side of fruit growing too. He has, all told, about 80 acres of apple orchard, 300 trees of which are Golden Delicious. Taylor is president of the Michigan Apple Institute.

AMERICAN FRUIT GROWER

OHIO—The State-wide marketing program of Ohio Apple Institute will be vigorously continued this year. Chain store co-operation in moving the Ohio apple crop has already been assured.

Part of the educational phase of the program to acquaint grocery clerks and consumers with Ohio varieties and their best use in season consists of variety display cards for placement in apple containers. On one side these cards indicate the variety and its best uses; on the reverse side is a classified table showing the best season and use of the various commercial varieties in Ohio. Information on cost of cards is available from H. L. Mantle, Painesville, president of the institute.—F. H. BEACH, Columbus.

KANSAS—Dr. W. A. Ruth, of Illinois, will be one of the key speakers at the annual State horticultural society meeting (see page four for dates). Annual banquet will be held on the evening of December 1.

James Sharpe, one of the State's veteran horticulturists and owner of a 300-acre apple orchard near the historic town of Council Grove, has just completed a \$15,000 dwelling.—GEO. W. KINKEAD, Sec'y, Topeka.



FLORIDA—The sight of SILVER oranges in a store window prompted an investigation. A new idea in the wrapping of oranges for shipment is being tried out by Race Groves of Winter Haven. Each orange is enclosed in a sheet of aluminum foil with a sheet of tissue inside.

It is claimed that with this new method oranges will remain firm from three to six months when placed in cold storage at a temperature of from 36 to 40 degrees Fahrenheit. Shrinkage will be eliminated and flavor and juice retained as they were when picked. Decay will be reduced to a minimum, as each orange is isolated and if one orange breaks down, the organisms of decay cannot spread to the others.

WASHINGTON—The ever-present codling moth haunts not only our orchards but our horticultural society programs. This winter's discussions on fruit pests will center on codling moth and mite control. Peach pests undoubtedly will be discussed also. (See page four for society meeting dates.)

The health value of apples will be ably discussed by one or more speakers who have been carrying on investigational work along this line. The influence spray residue on fruit has on human health will comprise a part of the health discussion.

Special pruning notes will be of vital interest to growers. Apples, peaches, and apricots will be considered in this connection.

Because of the many soil problems that have been brought to our attention during the past year, some interesting talks are being scheduled in which numerous soil questions will be answered. Cover crops, soil deficiency, and fertilizers are among those phases that will be discussed.—J. C. SNYDER, Sec'y, Pullman.

SOUTH DAKOTA—Of particular interest in the experimental orchard of Dr. N. E. Hanson, near Watertown, is the Hanson Bush

NOVEMBER, 1938

Cherry. (Prominent nurserymen seem to have adopted this name for the greatly improved sandcherries.) After many seedling generations, these now average fully as large as the Early Richmond sour cherry, are black in color, and of pleasing flavor. They grow in bush form, between three and four feet in height, and bear early. As they come true or improved from seed, seed can be planted one year and fruit harvested the next. Especially large ones, approaching an inch in diameter, can be propagated asexually by budding.—W. A. SIMMONS, Sec'y, Sioux Falls.

INDIANA—If past records are a criterion, the 18th annual Purdue Student Horticultural Show (see page four for dates) should attract more than 6000 people, 1937's record. The show will include exhibits of fruits, vegetables, nuts, and flowers.

Harvest records at Purdue University indicate that the 1938 yields for standard grape varieties in northern Indiana were one-eighth to one-tenth of the 1937 yields. This excessive decrease in yield was due mainly to the freezes of May 12 and 13, 1938. At Lafayette the Red Lake currant and Glendale gooseberry withstood the cold better than other varieties although their yields were much reduced. Brambles suffered less than other fruits from the freezing temperatures.—R. L. WINKLEPLECK, Sec'y, Lafayette.

NEW YORK—Speaking on the subject of "Taking Advantage of Opportunities," Willis Henderson of Penn Yan, in the Finger Lakes region of New York, says:

"My 20 years practical experience as a fruit grower has convinced me without a shadow of a doubt that the success or failure of a man engaged in this business depends more upon his skill as a prophet than upon his ability as a producer. Gains coming from the ability to foresee future demands and to plant and prepare for them exceed the margin of profit which competition presents, for successful growers do little unintelligent guessing about their important business matters. Too often the grower will grow what he wants to, and it is only natural to grow the things that are easy to grow and which do well. But this is putting the cart before the horse. The producer should first figure out what the public wants."—H. B. TUKEY, Geneva.

RHODE ISLAND—The hurricane of September 21 damaged the fruit industry of Rhode Island to the extent of close to \$1,500,000. In most orchards 15 to 20 per cent of the trees were destroyed and fully 70 to 75 per cent of the crop was crashed to the ground. Heavy building losses were experienced in some cases.

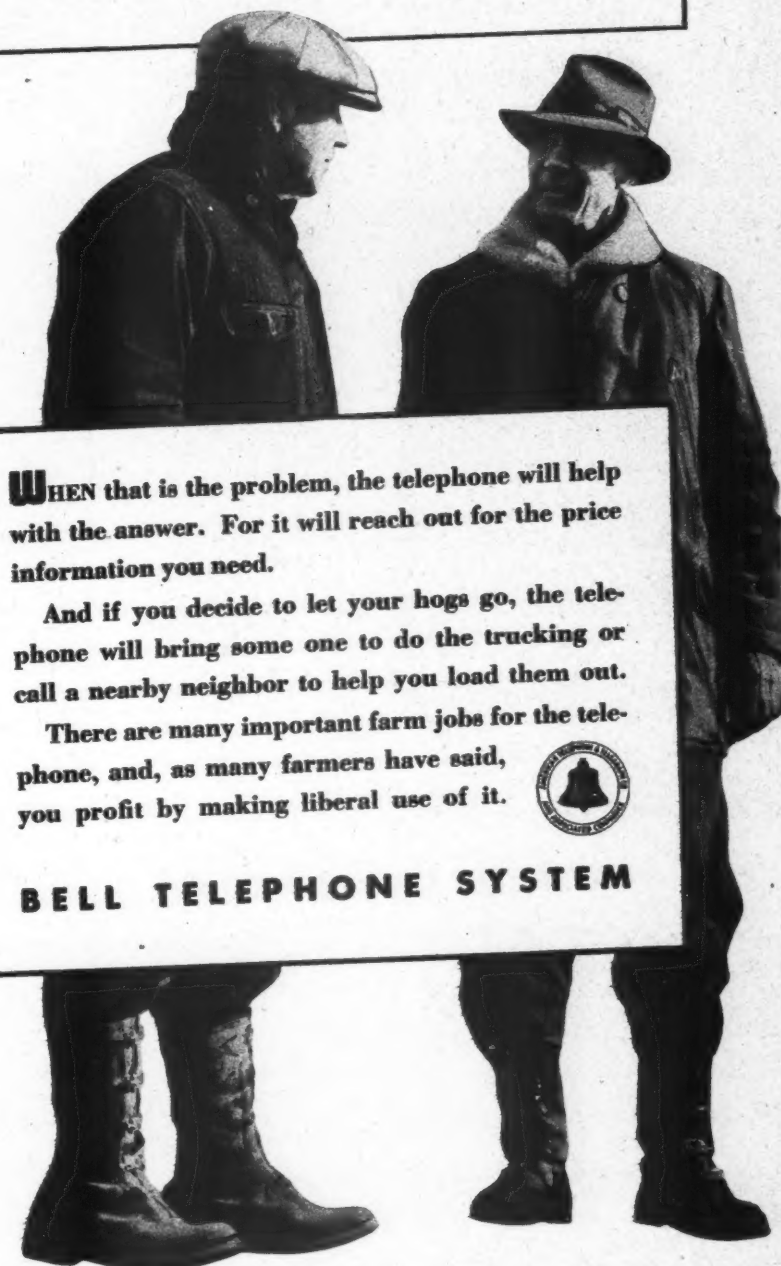
The Federal Surplus Commodities Corporation has helped by buying up apples for relief purposes. Growers are bracing injured trees and making every effort to save what they can. This is the second severe loss in less than a decade. The cold winter of 1933-34 injured many trees. This year was the first since then that Baldwin trees have set a heavy crop.

The grower committee in charge of buying of apples is made up of John Suesman of Meschanicut, William Reid of Wallum Lake, and Mark Spink of Greenville. County Agent William H. Wood acted as co-ordinator.—E. P. CHRISTOPHER, Sec'y, Kingston.

IOWA—Chief speakers during the annual convention of the Fruit Growers Association (see page four for dates) will be Dr. V. R. Gardner, head of the Department of Horticulture, Michigan State College, and E. A. Bierbaum, Anna, Ill. Chief topic for discussion will be marketing of fruits and vegetables.

Fruit production report for the State for October 1 is as follows: Apples, 1,392,000 bushels in 1938 compared with 1,174,000 in 1937 and a 10-year average of 1,320,000. NOVEMBER, 1938

"I don't know whether to
hold my hogs or sell now"



WHEN that is the problem, the telephone will help with the answer. For it will reach out for the price information you need.

And if you decide to let your hogs go, the telephone will bring some one to do the trucking or call a nearby neighbor to help you load them out.

There are many important farm jobs for the telephone, and, as many farmers have said, you profit by making liberal use of it.



BELL TELEPHONE SYSTEM

Pears, 108,000 bushels in 1938 compared with 144,000 in 1937 and a 10-year average of 90,000. Grapes, 5300 tons in 1938 compared with 5000 in 1937 and a 10-year average of 5930.—R. S. HERRICK, Sec'y, Des Moines.

DELAWARE—The late apple crop has been light in some sections of the State while in others an average crop has been produced. Bitter rot has been prevalent in orchards not receiving Bordeaux sprays. Considerable fruit spot has shown up on Grimes Golden, Jonathan, and Golden Delicious. Fortunately, the State escaped the hurricane which did so much damage to New England orchards.

Dr. F. S. Lagasse, formerly research horticulturist at the experiment station, resigned September 15 to accept a position with the U.S.D.A. in Florida on tung oil work. The writer is now research horticulturist at the Delaware station.—E. W. GREVE, Newark.

UTAH—Peach growers from Toquerville got together in the packing of their peaches this year and were pleased with the results. Growers who sent their crop through the central packing plant received almost twice as much for their fruit as other growers putting up ranch packs. One carload was inspected by a dealer of many years' experience and he rated it as the best in quality and appearance he had ever seen.—A. STARK, Sec'y, Logan.

IDAHO—The budget of the Idaho Fruit and Vegetable Advertising Commission will be \$200,000 this year instead of the \$125,000 originally planned. The increase is due to funds which accumulated during litigation which held up the State's advertising for nearly a year. The commission reports a 100 per cent sales increase as a result of its 1938 prune campaign. The apple drive is now under way.

DISREGARD



Mr. Bug and his friends, the codling moth, flea weevil, curculios, and other chewing insects, say Alorco Cryolite takes away their livelihood. Too bad, hey! But, seriously, this effective control stops the ravages of insects which attack both fruit and ground crops. The finer powder covers more surface, sticks better. Buy from dealer, or send to distributors for information. **ALUMINUM ORE COMPANY,** (Sales Agent: ALUMINUM COMPANY OF AMERICA, Pittsburgh, Pa.)

ALORCO CRYOLITE

Distributors:

Stauffer
Chemical
Company,
New York City

E. I. DuPont de
Nemours, Gravelle
Chemicals Dept.,
Wilmington, Del.

CLUBS • SHOPPING CENTER • AMUSEMENTS • TRANSPORTATION

Today...

and for these many years the center around which Philadelphia's business, social and amusement circles closely revolve.

One of the Few
Famous Hotels in America

BELLEVUE STRATFORD

IN THE HEART OF PHILADELPHIA

CLAUDE H. BENNETT, GEN. MGR.

FRUIT TREES

Grown by Virginia's Largest Growers

Offered at considerably reduced prices.

500,000 PEACH in a large assortment of varieties and sizes. Buds cut from bearing orchards, assuring planters of trees true to name.

300,000 APPLE in the New Double Red Strains, as well as in the most popular standard varieties.

WRITE FOR FREE COPY OF OUR NEW 44 PAGE PLANTING GUIDE and New Low Price List.

WAYNESBORO NURSERIES, Waynesboro, Virginia

PAGE 16

DOES YOUR ORCHARD NEED BORON?

(Continued from page 5)

any point in the flesh. If internal cork starts within about six weeks after petal-fall, the lesions become dry and corky. The surface of the apple may become depressed over the cork lesions, so when numerous lesions are present, the fruits are severely stunted and bumpy. If internal cork starts at midsummer or later, the lesions may involve much of the interior of the fruit. However, the affected tissue is not so dry or corky and the fruits are approximately normal in size and shape. Affected apples may be abnormally dark red, pebbly to the touch, and in the McIntosh variety, they tend to drop early.

The other fruit symptom, commonly called drought spot, involves the death of large surface areas before the fruit is half grown. Perhaps more logically it should be called external cork. It evidently does not differ materially in origin from internal cork. Which form the disease takes seems to depend chiefly on the variety and the stage of fruit development when lesions start. In McIntosh, lesions originating during the first few weeks after petal-fall are usually of the external surface type; later in the season the internal type predominates.

In both internal cork and external cork, the fruit may be dwarfed and tends to be dry and insipid. Generally, there is no storage development of the fruit symptoms caused by boron deficiency.

The two major tree symptoms are dieback and rosette. They resemble the symptoms of boron deficiency on a wide variety of woody and herbaceous plants.

The first stages in the development of dieback are manifest in late summer. On certain terminals, leaves develop yellowish or bronze color, with red veins and marginal scorching especially near the tip. Beneath axillary buds, dead vascular tissue may be found. This dead tissue in the cambial region and inner bark enlarges until the twig dies from the tip backward. Live portions of the twig over one year old may exhibit internal bark necrosis and external roughening similar to that sometimes called apple tree measles.

Associated with dieback, we have a symptom known as rosette. Tufts of dwarfed, narrow, brittle leaves appear at the tips of terminals or spurs. Sometimes these terminals are otherwise bare for a foot or more back of the rosette. The tuft results from extreme shortening of internodes of the stem.

Only a very mild boron deficiency is required to produce the late-season type of internal cork. Therefore, this form is the one with the widest geographical distribution. Very severe boron deficiency is required for the development of dieback and rosette.

The trouble most commonly confused with internal cork has three common names: stippen, bitter pit, and Baldwin spot. However, the cork disease may start as soon as two weeks after petal-fall, whereas stippen seldom is noticed until the fruits are approaching maturity. Cork usually does not advance in storage, while stippen advances and in fact often first becomes visible during storage. Early severe cork stunts and irregularly deforms the fruit, while stippen causes only rather small pits without dwarfing or distorting the general shape. In the Northeast, cork is most frequently found in Cortland and McIntosh varieties, while stippen is commonest in Baldwin and Spy.

External cork (drought spot) often is mistaken for frost injury or spray injury. Its occurrence on particular trees and particular limbs without consistent relation to elevation or exposure often will serve to eliminate frost or sprays as causal factors. Then, too, the first visible stage in the development of external cork or drought spot

is the occurrence of large patches of light brown dead epidermis studded with beads of an amber-colored sticky exudate. No such stage is associated with frost or spray injury.

One point on geographical distribution of boron deficiency in apple is of interest. It has been seen in all New England states with the possible exception of Rhode Island, in New York, Pennsylvania, Maryland, West Virginia, Virginia, and the eastern provinces of Canada including Ontario. It also is known to occur in such far western states as Montana, Idaho, California, Oregon, and Washington, and in British Columbia, Canada. There are few if any dependable reports from the central portion of North America. Is this because of a fundamental soil difference, or have these symptoms merely gone unnoticed? I should appreciate receiving fruits with suspicious symptoms.

When I became interested in this disease in 1926, it was well known in the Champlain Valley that outbreaks occurred chiefly in the dry years. This was confirmed by securing partial control by irrigation. It now appears probable that drought decreased availability of boron, which occurs in minute quantities in normal soils. Unfertilized trees in sod were low in vigor but uniformly free from symptoms. Evidently their demand for boron was small and within the boron-supplying power of the soil. Cultivation or application of any of the commonly used chemical nitrogen carriers greatly increased growth and yield but on some soils brought about cork, dieback, and rosette. Evidently this was because added growth increased the boron demand beyond the boron supplying power of the soil. Either a hay mulch or a manure mulch when continued for several years reduced the severity of the symptoms, presumably because of improving the boron supply.

A few experiments involving the injection of chemical solutions, including boric acid, into trees were made in 1926 and subsequent years. Since a considerable amount of tree injury resulted, the injection method was abandoned in favor of soil application of chemicals. Results were inconclusive due to scarcity of disease in untreated checks.

At this stage, workers in British Columbia and New Zealand announced favorable preliminary results from use of boron chemicals. Boron has since been so uniformly effective when applied by investigators in various parts of the world that detailed data seem unnecessary.

In a typical experiment in 1937, we had 67 treated trees and 67 untreated checks. More than 99 per cent control of internal cork was secured both by injection and by soil application. In another, trees with over 50 per cent of the branches dead resumed vigorous growth. In others, so-called drought spot or external cork was prevented.

Perhaps the most widespread commercial application of boron has been in British Columbia where nearly all of the orchards have had a soil application of boric acid following the pioneer experiments of Dr. H. R. McLarty and associates. However, hundreds of acres of orchard have had soil applications of borax in the Champlain Valley of New York, and the treatment is being adopted in several other districts.

Usually, in the United States, a fertilizer grade of borax has been found satisfactory. Purchased in quantity, it commonly costs three to four cents a pound and is available through fertilizer dealers and others. The granular form is more convenient than the powder form. Borax as handled in grocery stores is suitable but more expensive. Boric acid is equally effective though usually more costly per unit of boron.

(Continued on page 19)

SAVE THE CHAINS!

(Continued from page 7)

to the 203 members of Apple Producers Stabilization Committees organized in 32 states in connection with the co-operative effort."

Following this massed sales attack to save King Apple, the growers became enthusiastically articulate, almost for the first time. The following are representative of the replies received from producers (14 states are represented in these statements):

"Marketing the 1937 apple crop . . . was the biggest fruit-marketing job ever tackled. In spite of this, it is assured now that practically the entire apple crop will be marketed; where for a time it appeared certain that 'dumping' from storage in considerable quantities would be inevitable. That this tremendous tonnage of apples was moved into consumption without appreciable waste is little short of a modern merchandising miracle. One of the leading—possibly the leading—factors in this has been the splendid assistance of the chain grocers. The job could not have been done without them. We feel that we are entirely conservative in stating that the combined promotional efforts for apples added a minimum of five cents per bushel to the seasonal average price, bringing 10½ million dollars into the pockets of the growers, on the 211-million bushel crop. We credit more than half of this price maintenance to the extra efforts of The Organized Grocers."

No less a national observer than Raymond Moley records the fact that this moving of a surplus apple crop was but a part of the functional service of the chains, and not just a merchandising stunt. In a recent issue of *Newsweek*, he draws attention to the fact that the "chains are always on the alert to find a surplus offering and, when a large supply of some specific farm commodity appears, the chains seize upon it and feature it from a price standpoint. Their great organization enables them to work off such a surplus through their far-flung distribution machinery. There have already been national campaigns this year for the purpose of moving surpluses in all of the following lines: eggs, lettuce, cotton, apples, oranges, canned cranberries, milk and dairy products, canned peaches, canned grapefruit, canned grapefruit juice."

In April and May of 1936 the chains also played the leading role when a new chapter was written in the marketing of fruit products in this country. This chapter was entitled, "The National California Canned Peach Sale."

During those two epic months the chains united in a common effort to assist a group of producers in California who found themselves faced with disaster by an overwhelming surplus of canned peaches. In the face of that surplus, California growers saw little hope for the sale of their oncoming 1936 crop. In this situation, they appealed to the food chains for help.

Then, not only did the chains initiate a selling campaign which resulted in the disposal of the surplus, but in doing so they demonstrated that they could conduct a campaign not only to benefit growers and to give consumers a good product at moderate prices, but also to make a profit for themselves. As a result, members of the National Association of Food Chains and the Great Atlantic and Pacific Tea Company, controlling together approximately 37,000 retail stores, later declared as a permanent policy of operation their willingness to assist producers through their co-operative organizations, or through other established producer agencies, in the effective marketing of

excess seasonal production and surpluses.

Now, however, shortly after they have clasped the hands of fruit growers in a gesture of good will and friendship, with its benefits for all concerned, the chains are confronted with the threat of the Patman bill and a schedule of taxation which will quickly do what it is designed to do, namely, choke them to death.

A crisis confronts the chains, just as at various other times a surplus crop crisis has threatened apple growers, peach growers, citrus growers, and other fruit growers with ruin. Again and again the chains have helped to save the fruit growers. Now is the time for fruit growers to cement this friendship by doing everything within their power to help the chains. Talk to your friends about the fact that the fruit growers' "life line of distribution" is threatened by the Patman bill. Write to your congressman and tell him the same thing in no uncertain terms. Act individually, and in groups, but ACT QUICKLY for January will soon be upon us and Patman, himself, will be pleading forcibly in the House of Representatives for the sudden death of the chains by means of his discriminatory tax bill.

Act then—and SAVE THE CHAINS, if you would save yourselves!

MINIMIZING WINTER INJURY

THE problem of winter injury is one that confronts the nut grower as well as the fruit grower. Among the nut trees filberts, chestnuts and English walnuts are less hardy than the hickories and black walnuts. Some forms of the Japanese walnut also lack hardiness in severe winters. It is usually customary to accept winter injury as an act of God and little attention is paid to reducing injury from severe cold except to use hardy varieties when available and satisfactory. There are, however, certain principles of orchard management that may be applied with more or less success in an attempt to reduce winter killing. These principles were set forth in an address by Prof. R. A. Van Meter of the Massachusetts State College at the recent Boston meeting of the Northern Nut Growers' Association.

Among the types of winter injury that may occur in nut trees are the killing back of the smaller branches and various forms of bark injury. In a normal dormant small branch the pith is most easily frozen to death and is followed in order by the sapwood, the bark, and the cambium.

Prof. Van Meter lists the following things which may be done to guard against winter injury:

1. Choose soils with care. Poorly drained soils favor root drowning in early summer and late growth in autumn. Rich moist loams give uncontrolled growth which may result in twig killing and bark splitting.
 2. Avoid frost pockets and exposed locations.
 3. Plant only the hardiest varieties.
 4. Fertilize intelligently. Use quickly available materials that will be used up promptly and not remain to stimulate late growth. Inorganic materials such as nitrate of soda and sulphate of ammonia are preferable to organic materials such as manure used liberally.
 5. Stop cultivation early to permit the development of a cover crop before winter. This will check tree growth and permit the tissues to mature normally.
 6. Preserve the leaves until normal leaf fall. This means control of insects and diseases that injure the foliage.
- GEORGE L. SLATE, Sec'y. Northern Nut Growers' Assn., Geneva, N. Y.

AMERICAN FRUIT GROWER



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"In appearance there is no question but the new strain outclasses old Elberta. The seasonal ripening is a distinct advantage as it comes about 10 days ahead of the main harvest of Elberta."—W. A. Luce, Farm Representative, P. S. P. & L. Co. (formerly Orchard Advisor, Earl Fruit Co.)

"The thing that makes the Redelberta of interest to growers is the fact that it is about ten days earlier than Elberta. The peach has a **SOLID RED** colored cheek and apparently it colors solid red whether it is on the outside or inside of the tree."—C. C. Allen, Big "Y", Washington.

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PAGE 10

PEACH ORCHARD DEVELOPMENT

(Continued from page 9)

pacities: as an expert plantsman, a good farmer, an efficient employer and manager of labor, a mechanical engineer, a pest control expert, a salesman, an accountant, a lawyer, and a banker.

Successful competition in modern commerce is largely a matter of comparatively low cost of production and marketing of an acceptable grade of product. Low cost of production of peaches is obviously based, first, upon a favorable natural environment and the utilization of such favorable factors to the utmost. What nature provides costs little, but what man has to develop and provide may cost much. When one selects a location and a site for a commercial peach orchard, he accepts whatever natural handicaps are associated with it for the life time of the orchard. I refer to the climate, the soil, and the topography of the land.

A second class of factors of much concern in low cost of production are suitable labor at a fair wage, the opportunity to secure the necessary orchard equipment and supplies at a fair price, and economical marketing.

A third class of factors includes preferred varieties that are economical to grow, arranged in such a manner that they can be efficiently grown, harvested, and prepared for market. It is quite clear that the establishment of a modern commercial orchard is not a matter which should be considered lightly or be hastily decided.

When the details of actually selecting an orchard site are considered, the matter of a favorable elevation above sea level for the district is of prime importance. It often means the difference between a crop of fruit and no crop in unfavorable seasons. It is during such seasons that prices are the best. In New Jersey there are areas where a difference of a mere five to 10 feet in elevation means the difference between success and failure in a peach crop in some seasons.

A favorable soil is a necessity for peaches in addition to a proper elevation for the region. Topography of the land and the arrangement of the trees should be such as to provide for economical and efficient servicing of the orchard.

By means of an orchard plan, one can definitely arrange in advance for the most efficient care and servicing of the orchard that is possible under the conditions which prevail. Tillage should never be up and down slopes which erode badly, but across the slope. It requires extra power to haul sprayers up steep slopes and it is tiresome for men on the ground to walk up such slopes, especially when the soil is tilled and wet.

Close planting is inadvisable. It not only means too large a proportion of small or poorly colored fruits as the orchard develops, but it often makes it impossible to apply a greatly needed spray or dust in early summer. Most peach growers in the East and Middle West now consider 20 by 20 feet as a minimum planting distance. Orchards with trees set 25 by 20 and 25 by 25 are not unusual.

Soon after the introduction of the San Jose scale in the East, it became a popular practice to head peach trees at 18 to 20 inches above the ground. This resulted in low-headed trees, often with rather narrow main crotches near the surface of the soil. A somewhat higher head is now preferred in the East and Middle West. Growers not infrequently head trees at 30 to 36 inches at planting time. After one year in the orchard the distance from the ground to the lowest

(Continued on page 20)

AMERICAN FRUIT GROWER

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACTS OF CONGRESS OF AUGUST 24, 1912, AND MARCH 3, 1933

OF AMERICAN FRUIT GROWER, published monthly at Cleveland, Ohio, for October, 1938.

STATE OF OHIO
COUNTY OF CUYAHOGA

Before me, a Notary Public in and for the State and county aforesaid, personally appeared E. G. K. Meister, who, having been duly sworn according to law, deposes and says that he is the Business Manager of the AMERICAN FRUIT GROWER and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, as amended by the Act of March 3, 1933, embodied in section 537, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, American Fruit Grower Publishing Company, 1370 Ontario St., Cleveland, Ohio; Editor, J. H. Gourley, 1370 Ontario St., Cleveland, Ohio; Managing Editor, Dean Halliday, 1370 Ontario St., Cleveland, Ohio; Business Manager, E. G. K. Meister, 1370 Ontario St., Cleveland, Ohio.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.) American Fruit Grower Publishing Company, 1370 Ontario St., Cleveland, Ohio; E. G. K. Meister, 1370 Ontario St., Cleveland, Ohio; R. B. Campbell, Richmond, Virginia; Mary Lee Adams, Greenwood, Virginia.

3. That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company, but also, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

5. That the average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the six months preceding the date shown above is (This information is required from daily publications only.)

E. G. K. MEISTER,
Business Manager.

Sworn to and subscribed before me this 29th day of September, 1938.

(Seal) H. Wilkum, Notary Public.
(My commission expires October 17, 1938.)

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NOVEMBER, 1938

DOES YOUR ORCHARD NEED BORON?

(Continued from page 16)

Both early autumn and early spring have proved suitable times to apply borax. In orchards where boron deficiency symptoms have been observed a single application of borax is suggested. The following rates of application appear to be conservative for trees of normal size for their respective ages. For very large trees or heavy limestone soils they may not be heavy enough. The material may be broadcast by hand on the tree circle extending two feet beyond the branches.

Age of Tree	Amount of Borax
0-4 years	None—use manure
5-7 years	2 ounces
8-10 years	4 ounces
11-15 years	6 ounces
16-25 years	8 ounces
26 and older	8 to 16 ounces

It seems probable that once in two or three years will prove often enough to apply borax, and later applications may not need to be as heavy as the first. Experimental evidence is inadequate to justify positive statements as to amount or frequency of application. We have one lot of small trees that has received one-half pound of boric acid per tree for seven consecutive years without evident damage, but this is a medium-textured soil in a climate affording moderate rainfall.

It would seem wiser for a fruit grower with a cork problem to use borax than to depend on fertilizers stated to contain boron. The amount commonly included in fertilizer mixtures advertised to contain minor elements usually is far too low to serve as a first application to control the disease. One such mixed fertilizer contains only two pounds of borax per ton.

Inclusion of borax in sprays must be considered to be still in the experimental stage. In our work, the results have been disappointing, possibly because of rainfall.

Since the experimental work to date shows soil application of boron to be effective, there appears to be no justification for a fruit grower using the more dangerous injection method.

An overdose of boron on the soil beneath very young trees has sometimes caused defoliation. Though boron serves as an indispensable nutrient for apple trees, probably enough is present in most good soils, and it is toxic when too much is added by direct application or as an impurity in irrigation water. The latter has been noted in California. No benefits to trees have thus far been found except where definite boron deficiency symptoms were previously noted. Therefore, for the present, boron applications should be limited to orchards exhibiting these particular symptoms.

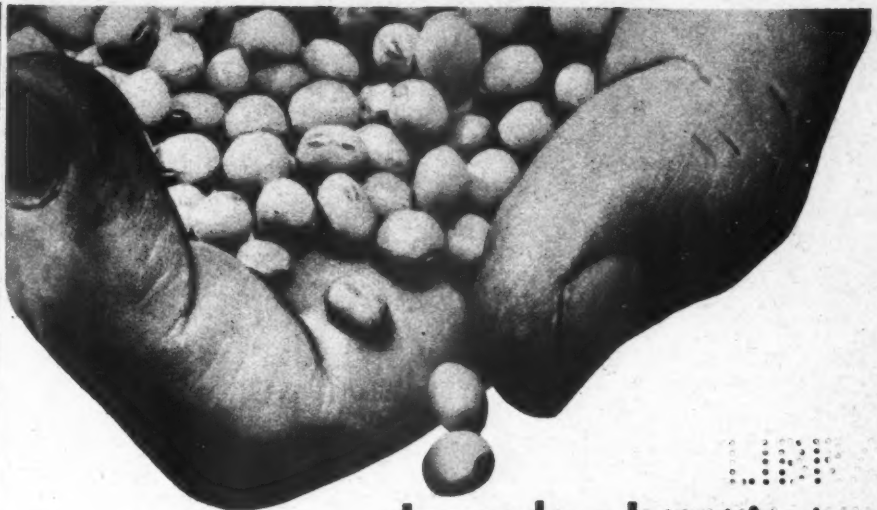
Specific deficiency disease symptoms have been overcome by boron applications in numerous crops including sugar beet, turnip, cauliflower, tobacco, celery, alfalfa, and various fruit trees. However, it is far from a cure-all in the orchard, and our results this year are discouraging with reference to the use of boron for control of so-called drought spot or gum spot of prune.

Growers contemplating use of boron would do well to talk it over with their respective local experiment station workers, since errors in method or amount may result disastrously.

COLD STORAGE HOLDINGS

With the opening of the cold storage season for apples as of October 1, the U.S.D.A. reports 154,000 barrels, 1,179,000 western boxes, and 6,207,000 bushels, including baskets, eastern boxes and crates, in cold storage. On October 1 a year ago there were in storage 135,000 barrels, 1,612,000 western boxes, and 5,421,000 bushels, including baskets, eastern boxes and crates.

NOVEMBER, 1938



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AMERICAN FRUIT GROWER

PAGE 19

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SIXTEEN SPARKLING PRINTS, 2 HOLLYSTYLE Enlargements with roll developed—25c. 20 Reprints 25c; 100, \$1.00. Photographic Christmas cards—10 for 40c; sample, 5c. LIFETONE STUDIOS, A-33, Des Moines, Iowa.

ROLLS DEVELOPED—TWO BEAUTIFUL DOUBLE Weight Professional Enlargements, 8 Never Fade Prints, 25c. CENTURY PHOTO SERVICE, LaCrosse, Wisconsin.

GUARANTEED: ROLL DEVELOPED, 16 PRINTS 25c. 20 Prints 25c. QUALITY PHOTO, Hutchinson, Kansas.

POULTRY

READ NEW ENGLAND POULTRYMAN! ALTHOUGH local in name, New England Poultryman is read nationally by leading poultry growers because of the high character of its editorial content and its carefully censored advertising. 1 year, \$1; 3 years, \$2. NEW ENGLAND POULTRYMAN, 4K Park St., Boston, Massachusetts.

PRUNING TOOLS

ATKINS, BARTLETT, DISSTON, PORTER, Seymour Smith, Tiffany saw shears. Hand and pole pruners. Tree wound paint. Ladders. Wire mesh tree guards. Tree surgeon supplies. TYSON ORCHARD SERVICE, Flora Dale, Pennsylvania.

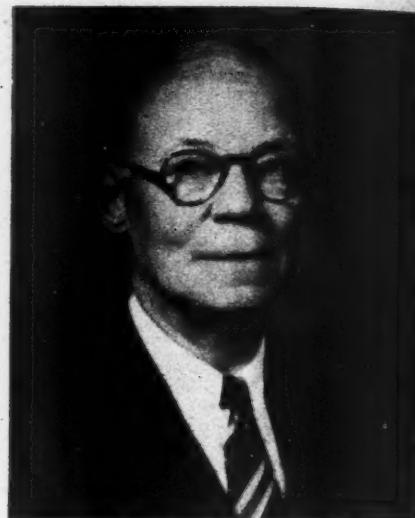
SERVICE BARRELS

FRESHLY EMPTIED, 8 hoop, 50-gallon whisky barrels; fine for wine, cider, vinegar, pickles, buttermilk, etc., \$1.65. 30 up 75c each. Ask for carload prices. Cash with order please. SHO-OFF ORCHARDS PRODUCTS COMPANY, 107 N. Washington, Peoria, Illinois.

PAGE 20



A. C. SEYFARTH



FRANK W. HEISKELL

HAIL and FAREWELL

AFTER serving more than 25 years as advertising manager of the International Harvester Co., Frank W. Heiskell retired on October 1. Prior to his appointment as advertising manager in 1913, Mr. Heiskell served the firm in various capacities at branch offices, starting in 1893.

Mr. Heiskell's successor is A. C. Seyfarth who had been assistant advertising manager of the Harvester Company since 1913. He started with the firm in 1904 as a catalog writer after attending the University of Michigan and the University of Chicago.

PEACH ORCHARD DEVELOPMENT

(Continued from page 18)

branch allowed to remain may be from 20 to 30 inches.

The soil of an orchard site should be fertile before the trees are planted. The term fertile is here used to mean a well balanced supply of nutrients and organic matter sufficient to produce a good crop of corn, tomatoes, or snap beans.

Where the subsoil is well drained but retentive of moisture, as in the case of some clay loam soils, the trees should develop to an extra large size if the surface soil is fertile.

When heavy applications of nitrate of soda, as, for example, 300 or more pounds to the acre, are required to secure a fair growth upon peach trees, it is likely to mean that the soil solution is out of balance and the grower is wasting money by applying only one nutrient. In such cases, one should check the need for organic matter and for calcium, magnesium, and the other nutrients. If there is any doubt about the fertility of the soil which is to be set to peaches, quick soil tests should be made.

Peach trees which make a poor growth at the beginning form poor heads and are more seriously affected by root gall, borers, and oriental peach moth. In the more severe cases, there is too large a percentage of dead trees associated with weak trees and the growth of the live trees is too variable.

Trees which possess not more than 25 branches of all lengths, of which only one to three are 24 or more inches in length, have made poor growth. It will require an extra year in many cases to bring such orchards into good bearing.

When one-year-old orchard peach trees make a fair to good growth, they will have a spread of three to four feet and possess 40 to 55 twigs of all lengths of which six to 10 will be 24 inches or more in length.

Previously to about 1925 the Elberta was the most profitable market peach from Georgia to southern Illinois and to

western New York. No earlier ripening peach could successfully compete with it on even terms. Today, some of the earlier ripening varieties in Georgia are said to be more profitable to growers than Elberta.

From about 1905 to 1925 about the only early ripening commercial yellow freestone grown in the South was Slappey. It never was grown to any extent in the Northeast. Elberta, therefore, had almost no competition, as the ripening line advanced northward, except from earlier ripening white fleshed peaches.

In this new era of increased planting, however, the situation is greatly changed. New yellow-fleshed freestones of good size, color, and quality, ripening before Elberta, are being planted in considerable quantities in the Northeast and elsewhere.

These include Golden Jubilee, Valiant, Vedette, Veteran, Halehaven and Golden East. Other varieties will be offered next year by nurserymen if reports are correct. It is generally recognized that the edible quality of each of these named is superior to Elberta, in the Northeast at least.

SPRAYER FACTS

Featuring complete illustration of mechanical details as well as full text and picture coverage of all models, the 1939 Hardie Mfg. Co. sprayer catalog has just appeared. This 66-page, attractively printed catalog presents facts on all types of sprayers from 1000-pound pressure models that deliver 80 gallons of spray per minute through the giant stationary systems to row crop and small barrow outfits. Included, too, are illustrations of the latest spraying accessories and details on a new line of light-weight sprayers for small-acreage growers. Completely labeled cutaway illustrations of pump, plunger, pressure regulator, valve assembly, and cooling system add to appeal of the book.

NOVEMBER, 1938

AMERICAN FRUIT GROWER

NEW

- PUMP AND ADAPTER
- SOLUTION FORMULA

By HANDY ANDY

With so many new items of interest to fruit growers being introduced, it's sometimes hard to keep track of all of them. But, by keeping on the lookout as much as possible, I'm trying each month to bring readers a picture of what's new for fruit growers. Please let me know about your uses of new products by addressing me in care of AMERICAN FRUIT GROWER.

PUMP AND ADAPTER •

Extra traction from wheel tractors is often a pronounced need, especially when pulling a heavy spray rig or for getting over that soft spot with the brush burner.



Instead of using the old metal weights on wheels, more and more growers are turning to water or calcium chloride solution in tractor tires.

A method of supplying water or solution to tires has just been perfected. A two-piece combination air-water valve that increases the flow of water into the tire at 50 pounds head pressure to 86 pounds per minute, as against 22 pounds under the old method, using a standard garden hose and the new adapter, is now available. Where there is no water pipeline or where the tires are being filled with calcium chloride solution, a pump is used to force water into the tires.

The new valve adapter is made in two

pieces, a plunger housing and a barrel which can be joined by screwing the threads on each together. There is an outside fitting on the plunger housing which accommodates standard valve caps and fits all air chucks now in use. This housing also contains a standard valve core and barrel of the valve has an inside diameter of one-quarter inch, permitting easy water passage.

Water-loading of tractor tires with the new adapter and pump is rapid. The tire is placed so the valve is in top position and the wheel is jacked up so there is no weight on the tire. Removal of water from the tire is relatively simple for a deflating plug is attached to the hose end, air pressure is built up in the tire, and water is forced out. Photos below show pumping calcium chloride solution into tire, building up air pressure in tire for water removal, and water flowing from hose after pressure has been built up.

SOLUTION FORMULA •

While on the subject of weighting tractor tires, here's some information I've just received on the proper amounts of calcium chloride to use in the solutions. Calcium chloride prevents freezing, may be left in tires during the summer and does not harm rubber or metal. For a good anti-freeze solution, add 9.6 pounds of calcium chloride to 4.8 gallons of water for 50 pounds of weight per tire; 19.2 pounds to 9.7 gallons for 100 pounds; 38.4 pounds to 19.4 gallons to make 200 pounds; 57.7 to 29.1 for 300 pounds; and 77 pounds to 38.8 gallons to obtain 400 pounds weight. Always add calcium chloride to water, never the reverse.

AMERICAN FRUIT GROWER

**'STALLING ALL CARS!
DON'T USE ANTI-FREEZE
'TILL YOU CLEAN OUT
WITH SANI-FLUSH!'**



OLD MAN WINTER has two strikes on you, if you put anti-freeze in a dirty radiator. Rust and scale choke the cooling system. Your motor overheats. You waste anti-freeze. You waste power. And you risk costly engine repairs. SANI-FLUSH makes it easy and inexpensive to keep radiators clean.

Just pour 10c worth of SANI-FLUSH in the radiator. (25c for the largest trucks and tractors.) Follow directions printed on the can. Run the motor. Drain. Flush. Refill with water and anti-freeze. Then you're all set for the winter. The delicate veins that circulate water are free and open. Motors run efficiently. SANI-FLUSH can't injure motor or fittings. You'll find SANI-FLUSH in most bathrooms for cleaning toilets. Sold by grocery, drug, hardware, and five-and-ten-cent stores. 25c and 10c sizes. The Hygienic Products Company, Canton, Ohio.

Sani-Flush Safe
KEEPS RADIATORS CLEAN CAUSTIC

This Easy Cutting Pruner

**won't pinch
hands or bark**

Home owners, or
chardists everywhere
prefer "Snap-Cut"
Pruners. They easily
slice 1/2" limbs without
tearing bark. Chrome
finish; comfortable
non-pinching handles;
one hand spring catch.

Famous "V" blade and anvil construction. No. 119 (8" long). At dealers or sent prepaid for \$2.00. Also No. 118 (6" long) handy pocket size-cuts 1/4" branches, \$1.25. Money back guarantee. Free circular.

Get more fruit and flowers by sending for 40-page book describing, illustrating proper pruning. Written by famous authorities. Price 10c or sent FREE with above pruner.

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WESTCO TURBINE PUMPS
WORLD'S SIMPLEST ELECTRIC PUMP—
Nothing to wear or cause trouble. 20-foot
suction lift. Operates cheaply. Money-
back guarantee. Write for FREE catalog
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SUCCESSFUL ORCHARDS

● A "ROUND TABLE" PAGE FOR EVERY GROWER ●

PROPOSES PLAN FOR UTILIZATION OF CULLS

IT'S a sure thing that one of the fruit industry's greatest problems is to keep culls out of the marketing channels. On this important subject, Fruit Grower Bond of Virginia says the following:

"Might we not keep all the objectionable fruit, all low-grade fruit at home, but still market the good part of it, that is, through by-products plants? I believe those apples could be put into cans, or processed in some other way, and a sufficient price gotten from them to keep them off the market. If this were done, the products manufactured from them could be more easily regulated and we could still put on the market a good, sound, low-priced product. I believe the question of more canning plants for the use of our low-grade apples would be well worth the consideration of every fruit grower."

Mr. Bond's statements, your "Round Table" editor believes, reflect the sentiment of many apple producers. Fortunately, private and Federal agencies are now engaged in research, that a greater diversity of products may be developed from the cull apple and thus rid the markets of this drag.

REPORTS SPY PROBLEM CONCERNS POLLINATION

PERHAPS we will be accused of looking ahead a little too far, but one of the first matters we have to consider if we expect a crop in 1939 is pollination. How one orchardist solved a difficult situation is explained in the remarks of Michigan orchardist R. H. Braman.

"I think the problem with Spy apple trees is pollination. We usually have from 100 to 150 swarms of bees and have to pay around \$3 a swarm. Last year we decided to use about one-third of the bees and plenty of bouquets of blossoms.



PAGE 22

\$1.00 EACH FOR YOUR NEW IDEAS

Here, each month, growers get together to discuss experiences and ideas. The beginner as well as the veteran discovers many practical suggestions for better and more profitable fruit growing. You, too, have some experiences that will be helpful to fellow growers. Send them—briefly written on a penny card is satisfactory—to "ROUND TABLE EDITOR," AMERICAN FRUIT GROWER, 1370 Ontario St., Cleveland, Ohio. One dollar will be paid for each item published on this page.

We used 50-gallon barrels and bought about 500 twenty-gallon carbide cans because we wanted a good bouquet of blossoms on all four sides of our trees.

"We have one block of 800 Spy trees and eight or nine pollinating varieties, so

To insure cross-pollination in his Spy orchard, Fruit Grower Braman places bouquets of blossoms in his trees, as related in the accompanying article and illustrated in the photograph.

we knew we were licked until we had some pollen. A friend of mine who has a couple of Wealthy trees permitted us to gather blossoms from these for use in our Spy orchards. We made it a practice to do a thorough job of pollination, so we put a bucket, barrel, or can of blossoms in the center of each tree. I would say that we spent around \$300 or \$400 doing this. Nevertheless, we had a heavy crop of Spys, especially in sections of the orchard where we hadn't had very good pollination before. The quality was good, the best we have ever had."

Mr. Braman's method of supplying blossom bouquets is illustrated in the photograph below.

IRRIGATION GIVES BOOST TO TREE AND CROP GROWTH

"I TRIED to build up my filbert orchard land," relates Ben Dorris of Oregon, "by planting cover crops which had grown well when the orchards were first planted, but as the trees grew larger there was a corresponding decrease in the size of the cover crop until finally it amounted to practically nothing. After some time and some investigation I came to the conclusion that, while other factors undoubtedly had something to do with it, the lack of water during the late summer and early fall months was the limiting factor. This was evidenced by the fact that while on the better soils there was little or no early leaf drop, in the sandier and lighter soils the leaves began to drop early, sometimes with the fall of the nuts. One year we had to float the orchards right behind the first pick because of the great difficulty in finding the nuts among the leaves. This almost doubled the picking costs.

"The land is rolling, so much so that flood irrigation is impractical. Briefly, the scheme I am using calls for lightweight portable mains laid out to the orchards from the water source. To these are attached smaller, perforated, lightweight pipes laid down the tree rows which spread water about the distance between the tree rows for the distance the pipe is laid. The portable mains are six-inch galvanized sheet iron pipes in 10-foot lengths. These are beveled on one end and slip into each other, being held by friction. If properly driven, the mains are practically leak-proof and are almost as stiff as threaded pipe.

"I am using a three-inch centrifugal pump, driven by a seven and a half horsepower electric motor, which is supposed to deliver, roughly, around 400 to 450 gallons per minute. Because of trouble I had in getting the irrigation set-up started, I would advise that irrigation layouts be planned several months in advance of the time the water is needed. I would also advise that growers contract to have irrigation systems set up and pumping water a full month before they are going to be used. In setting up the system, it sometimes takes specially made connections to fit the situation and even the few days required to get them made and shipped takes valuable time in June and July."

A Statement of Public Policy by The Great Atlantic & Pacific Tea Company

The Honorable Wright Patman, representative in Congress of the first district of Texas, has announced that he will introduce in the next Congress a punitive and discriminatory tax bill frankly designed to put chain stores out of business. In the past, Mr. Patman has been very successful in securing enactment of legislation which he has sponsored. He has demonstrated that he is a very able lobbyist and propagandist for his own bills. The management of The Great Atlantic & Pacific Tea Company is therefore faced with the necessity of deciding upon a course of action in relation to this proposed legislation—whether to do nothing and risk the possibility of the passage of the bill and the resulting forced dissolution of this business, or to engage in an active campaign in opposition to the bill.

In arriving at a decision, the interests of several groups of people deserve consideration—the management, the 85,600 employees of the company, the consuming public, the millions of farmers producing the country's food, and labor.

1. The Interests of the Management

The interests of the management can be dismissed as of very little importance.

The Great Atlantic & Pacific Tea Company is managed by George L. Hartford and John A. Hartford under an arrangement made by their father, George Huntington Hartford, the founder of the business. George L. Hartford has been actively engaged in the grocery business for 58 years, working generally six days a week, 52 weeks a year during that entire period. John A. Hartford has been actively engaged in the grocery business for 50 years, working generally six days a week, 52 weeks a year during that period. Both of these men could, of course, retire without personal or financial inconvenience and live very comfortably if chain stores were put out of business. The record of the last calendar year shows that out of any money earned annually from the business, in the case of George L. Hartford, 82 percent is paid to government in taxes; in the case of John A. Hartford, 83 percent is paid to government in taxes. As neither of the brothers has any children, any monies left out of their earnings would accrue to their estates, and in the event of their death, inheritance taxes would probably amount to two-thirds of such accrued earnings, leaving approximately 6 cents on the dollar as a motive for continued personal service.

It is therefore apparent that the interests of management need hardly be taken into consideration in arriving at a decision.

2. The Interests of the Employees

The interests of the employees of the company are, however, a matter of very grave concern.

It is simply a statement of fact to say that the employees of The Great Atlantic & Pacific Tea Company generally throughout the United States receive the highest wages and have the shortest working hours of any workers in the grocery business, whether chain store or individual grocer. Many of them have devoted all of their working lives to the interests of the company.

The management, therefore, has a definite obligation and duty to defend the interests of these 85,600 employees against legislation intended to throw all of them out of work.

3. The Interests of the Consumer

Since this business has been built by the voluntary patronage of millions of American families, we believe that we must give consideration to their interests in this matter. Millions of women know how acute is the present problem of providing food, clothing and shelter for themselves, their husbands and their children out of their present income. When food prices go up it is not a question of paying more for the same food. They do not have the additional money with which to pay. Therefore, they must buy less and eat less. A & P Food Stores last year distributed at retail \$881,700,000 worth of food at a net profit of 1%.

This food was sold to the public at prices averaging from eight to ten percent lower than the prices of the average individual grocer. Literally, millions of sales were made at prices twenty-five percent lower than those of the average individual grocer. This saving of eight to twenty-five cents on each dollar is of vital importance to these millions of families. If they were denied the opportunity to buy at these lower prices it would simply mean that in millions of homes they would have to leave meat off the table another day a week, eat less fresh fruits and vegetables, give the growing child one bottle of milk less every week or stint on butter, cheese, poultry, eggs and many other of the most nourishing foods.

In the last 10 years during the greatest period of chain store growth, the number of individual dealers has increased rather than decreased. We maintain that there is nothing wrong when these dealers charge more than we charge. They must charge these prices in order to make a fair profit. The average grocer will, upon request, deliver the groceries to the customer's door and in many cases extends credit to some of his customers. Delivery service costs money. The grocer must put this added cost in the prices to his customers. In the same way the extension of credit involves the expense of bookkeeping, the tying up of capital, and credit losses. There is nothing wrong in the higher mark up of the individual grocer, because he is rendering a service that justifies his prices.

If some customers can afford and voluntarily elect to pay a higher price for groceries and meats because they want credit or because they want delivery to their homes it is quite proper that they should pay an additional price for such service. However, the millions of families in this country whose income is limited and who can have more and better food because they are willing to pay cash and carry home their own purchases, should not be denied this opportunity. Millions of families of limited incomes can only enjoy their present standard of living through these economies and savings. These millions of American families have helped us build a great business because they believe we have rendered them a great service. The company, therefore, has an obligation and a duty to protect the interests of these customers.

4. The Interests of the Farmer

Eight million farm families are engaged in producing the food consumed by the American people. All of the farm homes in America, therefore, comprising one-fourth of all of the population of the United States, have a direct interest in the methods of distribution by which the products of their labor and of the soil are marketed.

Approximately 30% of their production is marketed through the chain food stores; about 70% through individual grocers. Their fruits, vegetables and other foodstuffs are sold through the chain stores at prices averaging 8% to 10% cheaper than the prices at which they are sold by many grocers. If the farmer sells a given product to both at the same price, the individual grocer must charge the public more to take care of his higher costs. Thus 30% of the farmer's products reach the public at low prices and 70% of his products reach the public at higher prices.

If the public cannot consume a given crop of apples, potatoes, berries or any other product, at the prices at which they are offered, these goods do not move from the grocer's shelves; a surplus accumulates and the farmer finds that he either cannot sell the balance of his crop or must sell it at a substantial loss. Only too often a situation arises when it is literally cheaper for the farmer to let his apples or his peaches rot on the ground than to expend the labor costs necessary to pack and ship them. Every farm economist knows that a 10% surplus does not mean 10% less return to the farmer but often more than 20% less return.

In other words the farmer's problem is to sell his products at the cost of production plus a fair profit and to get them to the public with as few intermediate costs and profits as possible. It is therefore obviously unfair to the farmer to propose legislation which would, at a single blow, wipe out 30% of his distributing machinery—and that 30% the part which maintains the price to the farmer yet reaches the public at low cost because of economical distribution. It would be just as unfair to the farmer to propose putting out of business all of the individual grocers of the country who distribute 70% of his produce. Both chain food stores and individual grocers perform a distributive function vital to the interests of the farmer. If either failed to function the farmer would be faced with tremendous surpluses and heartbreaking losses.

For years the A & P has dealt with the farmers both as producers and consumers. We feel that we have a definite obligation and duty to oppose any legislative attack upon their best interests.

5. The Interests of Labor

Every business in this country has a vital interest in the purchasing power of labor. When labor has high wages and great purchasing power, everyone is prosperous. When labor's purchasing power is curtailed, all business suffers and the American standard of living is impaired. For many years it has been the wise policy of the national government to protect real wages and the purchasing power of the worker's dollar. Combinations or agreements to raise prices, thus reducing real wages, have been declared illegal.

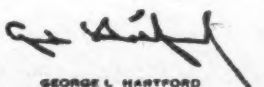
It certainly seems strange that it should now be proposed to destroy a group of businesses for the frankly admitted reason that they furnish the necessities of life to the wage earner and his family at low prices. There are approximately 900,000 workers directly employed in the chain store industry. What course is open to us but to oppose the action of a man who, at a time when more than 11,000,000 wage earners are already out of work and 3,000,000 families on relief, proposes a bill that would add almost another million to the roll of unemployed, wipe out 30% of the distributing machinery of all of the farmers of the United States, and raise the cost of living of the wage earners of the United States.

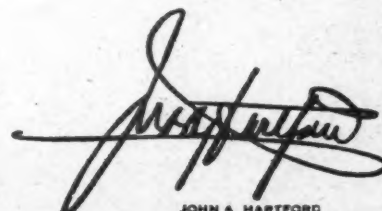
We believe that our organization has rendered a great service to the American people and that it is as a result of that service that we have prospered. If we consulted our own interest it would be very easy to stop and enjoy whatever leisure we have earned. No one is dependent upon us except our fellow workers. However, after the fullest consideration of all interests, we have arrived at the decision that we would be doing less than our full duty if we failed to oppose, by every fair means, legislation proposed by the Honorable Wright Patman.

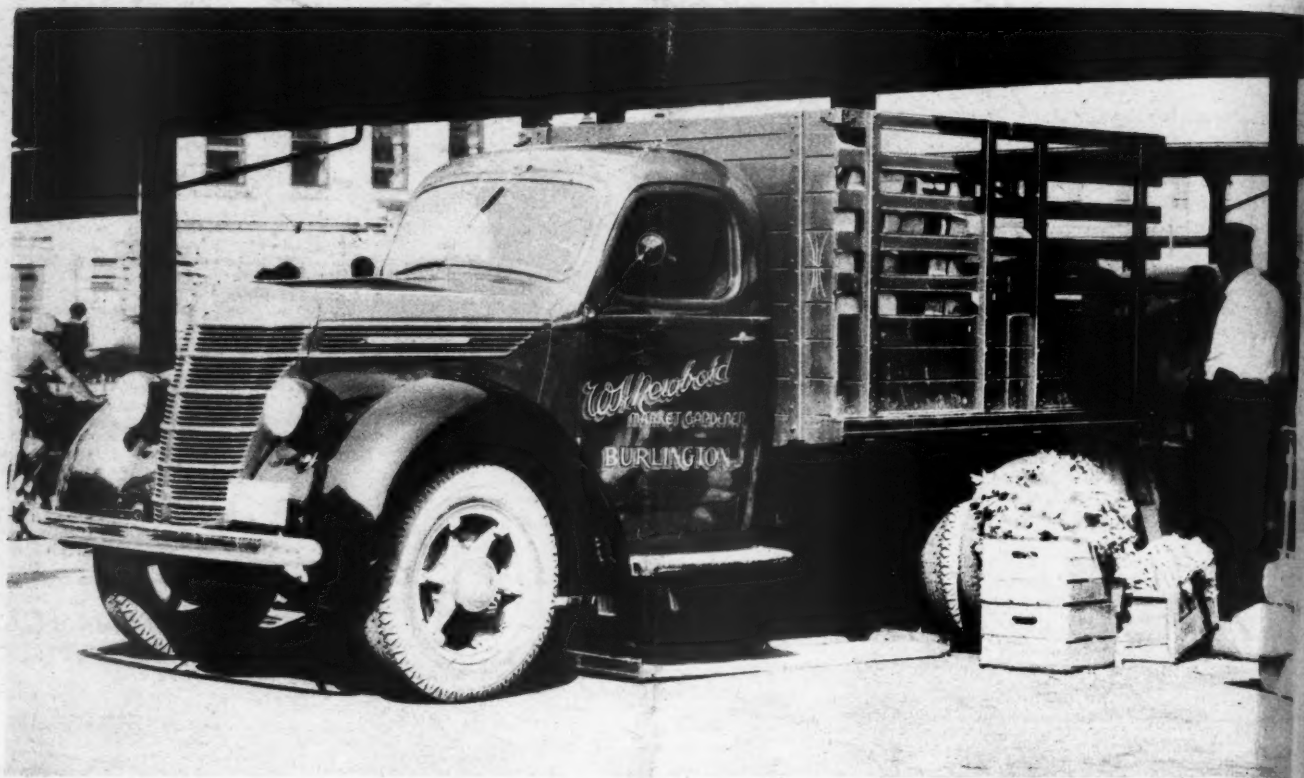
As we have said, Mr. Patman is an able politician, an able lobbyist and an able propagandist. In that field he is an expert. We are experts only in the grocery business. We believe the chain stores have a right to present their case to the American people. We will not go into politics, nor will we establish a lobby in Washington for the purpose of attempting to influence the vote of any member of the Congress. We expect only a full and fair opportunity to present the case for the chain stores as a great service organization for the American people.

Since the task we have set before us is one involving the widest dissemination of complete information to all of the American people, and since this is a profession in which we are not expert, we have engaged Carl Byoir & Associates, public relations counsel, to do this work. We realize that our views are seldom news. We know, therefore, that we must be prepared to spend a substantial sum of money in telling our story to all of the American people. We declare now that this money will be spent in the dissemination of information through paid advertising and every medium available to us, and in cooperating in the work or formation of study groups among consumers, farmers and workers, which provide open forums for a discussion of all measures affecting the cost of living.

We believe that when the American people have all of the facts they will make their decision known to their representatives in Congress. As Americans we will be content with that decision.


GEORGE L. HARTFORD


JOHN A. HARTFORD



Ruggedness, economy, and attractive styling are combined in this 1½-ton International Model D-30 with ample capacity stake body.

Ask any Owner or Driver about **INTERNATIONAL TRUCKS**

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